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Teen Dating Violence: Attitudes And The Mediating Role Of Self-Control From A Social-Ecological Perspective

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TEEN DATING VIOLENCE: ATTITUDES AND THE MEDIATING ROLE OF SELF-CONTROL FROM A SOCIAL-ECOLOGICAL PERSPECTIVE

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DEDICATION

To my wife Lisa, my family, my friends and my many mentors who helped me along the way.

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CHAPTER 1 INTRODUCTION

Intimate partner violence (IPV) is a serious health concern facing women and men across the United States. According to the National Intimate Partner and Sexual Violence Survey (Breiding, 2014), in the United States each year, more than 10 million people experience physical violence from a current or former partner. Approximately 1 in 5 women (22.3%) and nearly 1 in 7 men (14.0%) report severe physical intimate partner violence during their lifetime. In addition, the National Intimate Partner and Sexual Violence Survey (NIVPSV) reported that 1 in 11 women (8.8%) and 1 in 200 men (0.5%) had been raped by a current or former intimate partner in their lifetime. Furthermore, approximately 9.2% of women and 2.5% of men had been stalked by an intimate partner at some point in their lives. These problematic relationship behaviors commonly begin in adolescence, where between 9% and 30% of high school students experience IPV (Breiding, 2014; Eaton et al., 2012; Foshee, Bauman, Linder, Rice, & Wilcher, 2007).

The patterns of IPV and Teen Dating Violence (TDV) are developmentally distinct given life stage and context. Both are operationalized as having components and can include physical, sexual, psychological, or emotional violence, and stalking behavior (Cutter-Wilson & Richmond, 2011). Perpetration can occur in person or can be electronically facilitated and might occur between a current or former dating partner (Breiding, Chen, & Black, 2014; Centers for Disease Control and Prevention, 2016; Fifth & Pacific Companies, 2008; Hickman, Jaycox, & Aronoff, 2004).

While incidence and prevalence rates of IPV are eye opening relative to breadth and scope of the problem, the complex nature of teen dating behavior and TDV is not fully understood. Applying adult models to adolescents is problematic. While adult IPV can help inform our understanding of TDV, adolescent romantic relationships differ from adult romantic relationships.

Mulford and Giordano (2008) point to a number of factors that underlie adult IPV that differentiate it from teen dating relationships. Contributors to adult IPV include financial disparity or dependence and power imbalance as well as more realistic expectations and dating experience. Negotiating teen dating relationships often occurs as adolescents are navigating developmental challenges driven by rapid physical, psychological, and social-emotional growth. Adolescents are often inexperienced "daters" and as such, have difficulty expressing or communicating thoughts and emotions. This is further compromised by the uni-dimensional nature of and normative use of technologically facilitated modes of communication. In addition, peer influence, perceived social norms, and attitudes toward dating violence and behavior, along with the march toward autonomy and sense of agency, provide a platform for trying out new identities, feelings, and desires, along with testing coping skills when faced with conflict or disappointment (Sears, Byers, & Price, 2007).

Prevalence estimates of TDV also vary, ranging from 10% to 70% depending on study, sample, type of aggression (physical, psychological, emotional), and measure used to capture data, but there is a clear ubiquitous pattern of problematic behavior associated with teen dating relationships (Borrajo, Gámez-Guadix, & Calvete, 2015; Breiding, 2014; Eaton et al., 2012; Stonard, Bowen, Lawrence, & Price, 2014; Vagi, Olsen, Basile, & Vivolo-Kantor, 2015). Indeed, the problem is so widespread that the U.S. Congress designated February as Teen Dating Violence Prevention and Awareness month (Offenhauer & Buchalter, 2011).

Dating violence is associated with a myriad of deleterious outcomes, including poor psychological and behavioral adjustment, as well as delinquent behavior (Bonomi et al., 2006; Ellis, Crooks, & Wolfe, 2009; Ferguson, San Miguel, & Hartley, 2009; Nocentini, Menesini, & Pastorelli, 2010; Pico-Alfonso, 2005). Early experience with dating violence (in women) increases

the risk for dating violence in future relationships during college (Smith, White, & Holland, 2003). Men who perpetrated abuse in high school are at risk to continue abusing in college (White & Smith, 2004). There are identifiable risk factors for dating violence, including neighborhood disorganization, antisocial behavior (i.e., poor self-control) and poor parent-child relationships (Banyard, Cross, & Modecki, 2006; Fox & Benson, 2006; Giordano, Soto, Manning, & Longmore, 2010; Smith, Greenman, Thornberry, Henry, & Ireland, 2015; Williams, Connolly, Pepler, Craig, & Laporte, 2008). Protective factors have also been borne out in the literature, including the important role of parental supervision and participation in prosocial activities (Holt & Espelage, 2005; Meeus, Branje, van der Valk, & de Wied, 2007; Vagi et al., 2013) that may help prevent or reduce the impact of TDV perpetration and victimization. This study investigates modifiable risk and protective factors associated with TDV to contribute to the knowledge base and the prevention field. More specifically, this study examines the roles neighborhood disorganization, self-control, prosocial behavior, and parental supervision play in facilitating attitudes toward TDV.

Definition and Prevalence of Teen Dating Violence

Operationalization of teen years or adolescence varies (Arnett, 2000; MacKay, 2007; Organization, 2016). For the purposes of this discourse, Arnett (2000) definition of adolescence, spanning ages 10 to 18 is adopted inasmuch as this is when research has illuminated that dating relationships are first reported – and subsequent dating violence becomes problematic (Foshee et al., 2000).

Teen dating violence describes a variety of aggressive behavior used to control a romantic partner (Offenhauer & Buchalter, 2011; Teten, Ball, Valle, Noonan, & Rosenbluth, 2009). However, terminology can be convoluted. Other terms for TDV include courtship aggression, relationship aggression and sometimes, domestic violence. Consistent with Cutter-Wilson and

Richmond (2011), the Center for Disease Control identifies four specific forms of teen dating violence: physical (i.e., hitting, slapping, pushing), psychological/emotional (i.e., humiliation, threatening name calling), sexual (i.e., forcing sexual acts), and stalking (i.e., excessive monitoring and privacy intrusions) (Centers for Disease Control and Prevention, 2016; Vagi et al., 2015). As technology (i.e., texting and social network use) has become a more central part of adolescent relationships, psychological abuse in the form of monitoring and password/account sharing is common (Lucero, Weisz, Smith-Darden, & Lucero, 2014).

Offenhauer and Buchalter (2011) were commissioned by the U. S. Department of Justice to undertake an annotated bibliography and summary of relevant research findings on TDV among middle and high school youth from 1999 forward. These authors found considerable variation in reported rates of TDV across studies, depending on the definition of abuse used, type of sample, time-frame of abuse, and type of survey. Specific subtypes of abuse show different prevalence rates. Researchers reported physical violence rates ranging from 10-40%, psychological/emotional violence was consistently the most frequently reported, sometimes as high as 76%, and sexual violence was the least common, with rates ranging between 3-11%.

Stonard et al. (2014) reviewed 56 studies of adolescent dating violence and found that 10-30% of adolescents reported experiencing physical abuse, 35-55% psychological/emotional abuse, and 5-30% sexual abuse. Boys reported experiencing physical abuse more than girls, while girls reported both perpetrating and experience psychological/emotional abuse more than boys. Girls reported experiencing sexual abuse more than boys. In addition, Stonard et al. (2014) examined technological facilitated abuse (including stalking) and found 12 to 56% of adolescents reported technology-assisted dating violence victimization across studies, with 12 to 54% reporting perpetration.

In the 2013 National Youth Risk Behavior Survey, a national representative survey of 13,000 high school students (grades 9 to 12), Vagi et al. (2015) found that 20% of girls and 10% of boys in dating relationships in the past year reported being a victim of some form of teen dating violence. Girls reported more sexual (14%) and physical abuse (13%) than boys (6% sexual and 7% physical abuse). Experiencing any form of TDV was significantly associated with health-risk behaviors, like suicide attempts or drug use, and experiencing both sexual and physical abuse greatly increased the odds of these occurring.

A recent nationally representative online survey of 1800 adolescents (National Survey on Teen Relationships and Intimate Violence; STRiV), aged 12 to 18, found high rates of TDV among the 37% of respondents who reported dating (Taylor & Mumford, 2016). Over two-thirds reported experiencing some form of TDV at some point in their lives (69%), and, surprisingly, a similar number reported perpetrating some form of TDV (63%). Psychological abuse was the most common (65%), but physical (18%) and sexual abuse (18%) victimization were also commonly endorsed. Older adolescents (age 15-18) reported greater overall rates of victimization and sexual abuse and psychological subtypes than younger adolescents (age 12-14), but no difference in rates of physical abuse were found by age. There were few gender differences in victimization, but girls did report perpetrating physical abuse significantly more than boys.

The advent of computer related communication offers a new and ever evolving mechanism for the perpetration of TDV. The advent of social media has changed how people navigate and negotiate relationships, especially for adolescents. Websites like Facebook, Twitter, and Instagram are arenas for new digital identities to be displayed, judged and monitored. Teenagers choose what to share with their partners and the wider audience as well. The Pew Research Center's Internet and American Life Project found that by age 17, a majority of adolescents had their own cell

phone; and 30% reported receiving a nude or nearly nude image on their phones (Lenhart, 2009). Another recent phone survey of 1500 adolescents ages 10-17 found that only about 7% reported receiving nude or nearly nude images of others, and about 6% reported receiving sexually explicit texts from others (Mitchell, Finkelhor, Jones, & Wolak, 2012). Another study found that 46% of adolescents perpetrated TDV through computer (17%), face-to-face (5%) and both computer and face-to-face communication (24%) (Korchmaros, Ybarra, Langhinrichsen-Rohling, Boyd, & Lenhart, 2013).

Not much is known relative to the prevalence of stalking behavior in teens but epidemiological results found that 15% of adult women and 5% of adult men report being stalked by a romantic partner that made them very fearful or believe that they or someone close to them would be harmed (Breiding, 2014). In a recent survey, Ybarra, Langhinrichsen-Rohling, and Mitchell (2016) found that 36% of adolescents age 14-21 reported perpetrating some form of stalking behavior, most commonly "trying to talk to someone who doesn't want to talk to you" and "trying to get someone's attention by doing something 'over the top'" or provocative relative to unwanted behavior or attention.

Germane to this discussion, Teten et al. (2009) built on review findings and recommended using a social-ecological framework to develop prevention programs, and pointed to national and community campaigns, like Choose Respect and Expect Respect, that work to establish healthy relationship norms and educate young adolescents and their community. As awareness of TDV has grown, the Choose Respect program has been incorporated into the CDC Dating Matters training, while the Expect Respect program in Austin, Texas continues to promote healthy teen relationships and prevent dating abuse.

Developmental Features of Teen Dating Violence

From a developmental perspective, the literature is rife with depictions of adolescence being a time of transition and change across multiple domains and by gender. These transitions can occur simultaneously or at various intervals but what is central to adolescent development is that these changes impact the youth's developmental trajectory (Eccles & Gootman, 2002; Graber & Brooks-Gunn, 1996; Stroud et al., 2009). Psychologically, identity formation is underway and cognitive capabilities are maturing that affect impulsivity, self-control, and decision-making. Changes in brain structure and function, pubertal development and sexual interest – along with environmental context – contribute to the complexity of negotiating healthy dating relationships (Barber, Eccles, & Stone, 2001; Blakemore & Choudhury, 2006; Meeus, Iedema, Helsen, & Vollebergh, 1999; Steinberg, 2005). According to Steinberg (2005, p. 73), "…these developments reinforce the emerging understanding of adolescence as a critical or sensitive period for a reorganization of regulatory systems, a reorganization that is fraught with both risks and opportunities."

Adolescence and identity formation. Adolescence is a time of individual identity formation (Barber et al., 2001; Erikson, 1994; Meeus et al., 1999). The expansion of social identity beyond the family places greater importance on peer relationships. Positive social identity can be protective. For example, adolescent females with strong friendships with other girls with prosocial beliefs are less likely to use violence in dating; however, when girls have high social status they may also exhibit higher rates of violence (Foshee et al., 2013). When adolescents encounter challenges in their new relationships, they often seek help and guidance from their peers rather than parents or adults (Ashley & Foshee, 2005; Furman & Buhrmester, 1992; Furman & Shaffer, 2003). However, peers do not always provide accurate or effective help. In addition, witnessing dating violence and tolerant attitudes toward dating violence in peers normalizes this behavior and

places youth at greater risk for perpetration and victimization (Romero, Expósito, & Bonache, 2010).

Neuro-development. Brain development in adolescents may increase the likelihood of TDV. As noted above, the adolescent brain is still developing (with complete myelination not occurring until the age of 24), particularly the frontal lobes, which are associated with meta-cognition or higher order thinking and planning as well as executive functions (Gogtay et al., 2004; Poletti, 2009). Adolescents often struggle with poor decision-making and impulse control (Ladouceur, Conway, & Dahl, 2010). This can be especially problematic in a first dating relationship as adolescents have little experience in making relationship decisions. Because of their unfamiliarity and strength of feelings, impulses in romantic relationships can be difficult to control; thus, adolescents can be more likely to act without thinking through the consequences of their behavior (Steinberg & Scott, 2003).

Indeed, aggressive behavior in general is greater in adolescence. Psychological aggression increases linearly in 14-20 year old students, while physical aggression peaks at 16-17 years old (Fernández-González, O'Leary, & Muñoz-Rivas, 2014; O'Leary, 1999). Moffitt (1993) theory of adolescent anti-social behavior posits that a large portion of aggressive adolescents are *only* anti-social during adolescence, while a smaller group is consistently anti-social over time (Fernández-González et al., 2014). This peak in aggression and greater tendency to perpetrate violence suggest that adolescent relationships are at risk for dating violence.

First dating relationships. Dating relationships begin early, and are common in pre-adolescent or "tween" children (age 11-14). Dating violence in these relationships is frequently reported. An investigation of dating partner violence in 8th and 9th graders found that 69% of students said they were dating (Foshee et al., 2000). A large portion of these dating students also

reported being victims of dating violence: 34% of dating females and 37% of dating males (Foshee et al., 2000). In a study of tween relationships for Liz Claiborne, Inc., nearly half of all tweens reported being in a dating relationship (Glauber, 2008). Tweens and teens that reported early sexual experiences (sex by age 14) also indicated suffering verbal abuse (61%), physical abuse (34%), and pressure to have oral (36%) or penetrative sex (34%) (Glauber, 2008).

Trajectories of perpetrators and victims of TDV are identifiable in middle school (Orpinas, Nahapetyan, Song, McNicholas, & Reeves, 2012). Orpinas et al. (2012) followed students with yearly surveys from 6th grade to 12th grade and identified four groups by their characteristics as victims and/or perpetrators: a low victimization/low perpetration group (36%), an increasing victimization/increasing perpetration group (40%), a high victimization/high perpetration group (15%) and an increasing victimization/low perpetration group (7%). These groups differed by gender, with more females in the increasing victimization/perpetration group and fewer in the low victimization/perpetration group. Other differences were in individuals' propensity to act aggressively in peer relationships, where the high victimization/perpetration group had higher amounts of peer aggression and victimization, and ethnicity, with more African-Americans being in the high victimization/perpetration group.

Teen Dating Violence from a Socio-ecological Perspective

Teen dating violence is complex. The propensity to engage in TDV has been linked to multiple causes and risk factors, including psychological processes, family relationships, developmental stage, social relationships, socio-economic status, and others (Arriaga & Foshee, 2004; Howard & Wang, 2003; Malik, Sorenson, & Aneshensel, 1997; Silverman, Raj, Mucci, & Hathaway, 2001). To appropriately address the full context in which TDV occurs, a broad theoretical framework should be adopted. Bronfenbrenner's socio-ecological model (1977)

provides a suitable approach to analyzing such complex behavior. The socio-ecological model holds that the person can be best understood from a lifespan perspective and seeks to identify the bi-directional relationships of environmental contexts (i.e., neighborhood disorganization, extracurricular involvement) and proximal processes (i.e., parental supervision, self-control). The model (Bronfenbrenner, 1977; Bronfenbrenner & Morris, 2006; Swearer & Espelage, 2011) acknowledges the influence of multiple nested systems in determining the person's development and behavior; including the direct social interaction with family, teachers, neighbors, peers and friends, as well as the interaction of two or more contexts or relationships, i.e., poor parenting may result in a distrust or lack of respect for teachers and peers in a school setting, and ultimately the influences of the wider cultural context, including SES, ethnicity, race, cultural norms, values and laws. Such a framework is critical to parsing out and defining the relationships among multiple factors contributing to TDV. Greater knowledge of these contextual influences can assist in the development of efficacious prevention intervention efforts and inform causal theories.

Given the high prevalence of TDV and its substantial negative sequelae, it is important to understand what influences development and perpetuation of such behavior. Adolescent victims and perpetrators of intimate partner violence are likely to continue patterns of victimization and perpetration in subsequent relationships (Cui, Ueno, Gordon, & Fincham, 2013). If there are factors that influence adolescent attitudes towards engaging in dating violence, knowledge of these factors and where they occur from a socio-ecological perspective can assist in the development of efficacious prevention intervention efforts.

Risk and Protective Factors in TDV

There are a number of identified risk factors associated with the perpetration of TDV. In general, adolescents who engage in risky behavior, such as substance use and early sexual experience, are more at risk for adolescent dating violence (Chase, Treboux, & O'leary, 2002).

Neighborhood disorganization. Exposure to violence, even indirectly, can be disruptive and habituate/sensitize individuals to threats. Neighborhoods influence adolescents' views of what behavior is normal, including their attitudes about the acceptability and likelihood of violence (Stoddard, Henly, Sieving, & Bolland, 2011). In contrast to adolescents in less violent neighborhoods, adolescents living within more violent neighborhoods in Chicago reported more confrontational coping styles (Rasmussen, Aber, & Bhana, 2004). This is associated with other negative sequelae; for example, community violence is strongly associated with both post-traumatic stress and externalizing behavior among youth who live in such communities (Fowler, Tompsett, Braciszewski, Jacques-Tiura, & Baltes, 2009).

Neighborhood poverty has been significantly associated with higher rates of intimate partner violence and teen dating violence (Caetano, Ramisetty-Mikler, & Harris, 2010; Cunradi, Caetano, Clark, & Schafer, 2000; East, Chien, Adams, Hokoda, & Maier, 2010). Similarly, Fox and Benson (2006) found that related factors of neighborhood disadvantage and economic stress were both associated with intimate partner violence in adults. However, neighborhood disadvantage is highly correlated with poverty and economic stress, and an investigation of the unique contributions of neighborhood social cohesion and social control were not significantly associated with intimate partner violence (Fox & Benson, 2006).

There is also evidence that neighborhood disorganization significantly influences factors influencing teen dating violence, like self-control. The greater degree of externalizing behavior and confrontational coping styles seen among youth who live in chaotic, violent neighborhoods

supports the self-control depletion model (Schmeichel, Vohs, & Baumeister, 2003), described in more detail below. Living in an environment where safety is unavailable likely increases symptoms such as anxiety, irritability, and loss of sleep. As individuals witness patterns of community violence, aggressive behavior becomes a normal expectation in an adolescent's life (Fowler et al., 2009).

Parental supervision. Another contributor to adolescent development is parental supervision. It is thought that greater parental involvement reduces the likelihood that adolescents will engage in or tolerate TDV. Parental monitoring during adolescence can protect adolescents from becoming victims of TDV (Leadbeater, Banister, Ellis, & Yeung, 2008). Involved parents are more aware of problems and generally provide more accurate guidance to their children than information adolescents receive from their peers. In a study of adolescent dating violence among perpetrators and non-perpetrators, parental monitoring was significantly associated with dating violence victimization in girls, but was not associated with perpetration or victimization in boys (Chase et al., 2002). In a prospective longitudinal study, interviews with male intimate partner violence perpetrators and their partners, teachers and parents revealed poor parental supervision as a significant factor associated with perpetration, along with having a criminal father, a disrupted family, and a low income family (Theobald & Farrington, 2012).

Extracurricular Involvement. Extracurricular involvement is defined as engaging in extracurricular activities at school or being involved in community groups (Eccles & Barber, 1999; Eccles, Barber, Stone, & Hunt, 2003). This form of involvement is generally positively associated with education outcomes. Involvement in extracurricular and community activities has also attenuated some of the risk for adolescents attributed to neighborhood disorganization, as well as preventing adverse sexual outcomes (Fergus & Zimmerman, 2005). Furthermore, involvement in

prosocial opportunities are associated with higher self-esteem in adolescence (Kort-Butler & Hagewen, 2011). Adolescents often place higher value on the opinion of peers (Furman & Shaffer, 2003), so having a diverse social network may reinforce respectful romantic relationships, and protect potential victims from TDV. Also, involvement in group organizations can compete with time devoted to budding relationships, so extracurricular prosocial activities might by default reduce extensive focus on dating relationships where TDV might occur.

Potential Mediating Role of Self-Control and TDV

One proposed proximal process in explaining propensity for TDV is poor self-control. Self-control has many definitions, and may refer to self-regulatory behavior, executive functioning, or inhibitory control. Executive functioning is a broad construct, related to effortful mental processes of controlled attention, working memory and inhibitory control (Diamond, 2013). Self-regulation is also a broad construct, describing maintenance of goal directed behavior (Lord, Diefendorff, Schmidt, & Hall, 2010). In research on intimate partner violence, the concept of self-control has been specifically defined as failure of self-regulation or impulse control problems (Finkel, DeWall, Slotter, Oaten, & Foshee, 2009). Relationship conflict is normal, and within conflicts some individuals experience violent impulses towards their partners. The ability to effectively shift or mitigate these violent impulses is an important area of study, furthering prevention programs, training interventions and understanding of perpetration (Finkel et al., 2009).

Schmeichel et al. (2003) theorized that self-control is a resource that can be depleted under stressful circumstances such as lack of sleep or complex cognitive tasks. This is known as the ego-depletion model of self-control. In an IPV study of undergraduates, Finkel et al. (2009) found support for the model of ego-depletion in laboratory experiments of analog intimate partner violence, and also found that ego-bolstering activities, in the form of verbal or physical regulation

tasks**,** were successful in improving regulation of aggressive inclinations in response to provocation. Another theory, the general Theory of Crime (Gottfredson & Hirschi, 1990) proposes that much criminal behavior is due to low self-control, specifically poor impulse control (Sellers, 1999). Sellers (1999) investigated this theory, specifically between reported intimate partner violence and low self-control in a college student population, finding a moderate relationship between the two constructs. While life-stage and context must be taken into account when thinking about adolescents and generalizing the findings to TDV, such results are promising, since they provide some evidence that self-control can be improved.

Impulsivity is defined behaviorally as a preference for small short-term reinforcements over larger-delayed reinforcements, while self-control is defined by preference for larger delayed reinforcements over immediate or short-term small reinforcement (Vollmer, Borrero, Lalli, & Daniel, 1999). Lack of self-control may be thought of as impulsivity. Impulsivity has been associated with adult intimate partner violence perpetration (Caetano, Vaeth, & Ramisetty-Mikler, 2008), as well as psychopathology associated with impulse control issues like substance abuse (Schafer, Caetano, & Cunradi, 2004). Deficient self-control logically might lead to greater risk for TDV perpetration. Impulsivity and risk taking are also heightened in adolescence as well (Arnett, 1999).

Adolescence provides additional obstacles to self-control. Adolescents are stressed by the developmental pressures of puberty, including body changes, hormonal changes, the accompanying social and intellectual adjustments needed to cope with these changes, and identity formation. In addition, adolescents' frontal lobes, thought to be principally relevant to self-control, are not fully developed (Geier, Terwilliger, Teslovich, Velanova, & Luna, 2010). Consequently, when adolescents experience stress they may also have less developed resources, socially and

biologically, to cope with these demands. These circumstances suggest that adolescents are especially susceptible to ego-depletion of self-control.

Self-control has also been related to environmental factors. In a study of youth in Chicago neighborhoods, parenting factors, including warmth, supervision and lack of hostility, were consistently predictive of self-control, and neighborhood variables, like concentrated disadvantage, immigrant concentration, and residential instability, were moderately predictive of low self-control (Gibson, Sullivan, Jones, & Piquero, 2009). A review found that deficits in self-control are associated with a greater tendency to engage in delinquency (de Ridder, Lensvelt-Mulders, Finkenauer, Stok, & Baumeister, 2012). Self-control may be central to understanding TDV grounded in a socio-ecological framework due to the established link between low self-control and intimate partner violence, along with the relationship between self-control and distal environmental factors.

This study focuses on attitudes toward TDV, and how TDV attitudes may be related to self-control. Specifically, it is hypothesized that an impulsive person is more likely to engage in TDV. On the other hand, because attitudes are not behaviors (i.e., just because you engage in a behavior doesn't mean you think it's okay), it is helpful to view attitudes from a different theoretical lens. Based on the theory of Cognitive Dissonance (Festinger, 1962), individuals seek consistency with their cognitions (i.e., beliefs, opinions) – so when there is an inconsistency between attitudes or behaviors (dissonance), mental gymnastics result to the extent that something must change to feel better and not feel like a hypocrite. The thinking in this discussion is that impulsive people will alter their attitudes to reflect their behavior and show more tolerance for TDV, so as not to appear inconsistent in their actions/motives. There is some evidence for this, as one study found that inconsistency between reported attitudes toward dating violence and self-

reported dating violence behavior at an earlier time predicted behavior change at a later time point (Schumacher & Slep, 2004).

To summarize, it appears that self-control is central to understanding TDV. There have been multiple studies linking self-control to regulation of TDV. Biological development during adolescence, both in the forms of hormonal changes and frontal lobe capacity, places additional stress on self-control ability. Finally, many environmental factors are associated with self-control during adolescence, including residential stability, concentrated disadvantage, parenting warmth and supervision. Together, these associations suggest that self-control may provide a mediating relationship between distal environmental influences and TDV.

Attitudes Towards Teen Dating Violence

The goal of this study was to identify attitudes that contribute to TDV. There is substantial evidence that attitudes toward specific TDV behaviors, such as acceptability of threatening, hitting, controlling or blaming a partner, are associated with greater TDV perpetration (Cano, Avery-Leaf, Cascardi, & O'Leary, 1998; Eisikovits, Edleson, Guttmann, & Sela-Amit, 1991; Fincham, Cui, Braithwaite, & Pasley, 2008; Hanson, Cadsky, Harris, & Lalonde, 1997; McDonell, Ott, & Mitchell, 2010). Again, drawing from the IPV literature, Fincham et al. (2008), in a study of undergraduate students (N = 687), found that endorsement of tolerant attitudes toward abuse, control, and violence was significantly associated with perpetration of assault and psychological aggression in romantic relationships. To address the paucity of empirical research relative to better understanding attitudes toward intimate partner violence, attitudes were examined via the Attitudes about Aggression in Dating Situations (Slep, Cascardi, Avery-Leaf, & O'Leary, 2001).

The relationship between attitudes and behavior can be inconsistent. General attitudes are not very successful in accurately predicting specific behavior, largely due to potential for

inconsistency between the attitude and either, the action/behavior performed, the context where the action is performed, or the time the attitude/action is evaluated (Ajzen & Fishbein, 1977). For example, two people may have equally favorable attitudes toward church, but one person expresses favorableness by donating time to church while another donates money; thus, the general positive attitude is not predictive of a specific behavior (Fishbein & Ajzen, 2005). Nonetheless, assessing specific attitudes about specific behaviors has been successful in predicting behavior (Fishbein & Ajzen, 2005). Strong associations between attitudes and behavior are achieved when the attitude in question reflects specific behaviors. In the case of the present study, the measure of attitudes toward TDV provided specific behaviors of romantic partner aggression, maximizing the likelihood of high correspondence between reported attitude and actual behavior.

Gender norms. Gender norms appear to impact TDV incidence and perception. For instance, girls report greater perpetration rates of physical intimate partner violence than boys (O'Leary & Slep, 2012). Boys report higher rates of sexual intimate partner violence perpetration (O'Leary & Slep, 2012). Both genders experience high rates of psychological abuse, with girls reporting higher rates of perpetration and victimization of psychological abuse (Offenhauer & Buchalter, 2011; Stonard et al., 2014; Taylor & Mumford, 2016). Researchers have looked at motives and reactions to TDV between sexes. According to Molidor and Tolman (1998) one reason that girls perpetrate physical dating violence more frequently is that boys are more tolerant of physical abuse than girls, who show report greater negative effects from physical dating violence. Foshee et al. (2007) sought insight into the motives of perpetrators by analyzing narratives from TDV perpetrators. According to Foshee et al. (2007), girls reported a variety of motives for perpetration including "patriarchal terrorism," "anger response," "ethic response," and "first-time aggression response." Boys' motives were most commonly due to "escalation prevention."

Interestingly, self-defense is not often a common reason for adolescent intimate partner violence, though it is common in community samples of adult intimate partner violence (O'Leary & Slep, 2012). Male perpetration is viewed as less acceptable and female perpetration is viewed as less harmful, potentially due to the greater perceived potential for harm from male physical aggression (Archer, 2000; Black et al., 2015; Wekerle & Wolfe, 1999).

Research Aims and Hypotheses

Adolescence is the developmental stage when first romantic partner relationships generally occur, and consequently is an ideal time to study the contributors and attitudes toward dating violence. First relationships offer an opportunity to introduce protective relationship norms. Adolescence is also the period where physical and psychological aggression increases, and physical aggression reaches its peak (Fernández-González et al., 2014; O'Leary, 1999).

The definition of TDV includes physical violence, sexual violence, verbal threats, and psychological and emotional abuse. Currently, the Attitudes about Aggression in Dating Situations (AADS) is one of only a few measures that purports to sensitively measure TDV attitudes. However, to adequately assess the breadth of TDV, this study expanded this measure to include psychological and/or verbal aggression (see the Method section for a more extensive discussion of this measure). Consequently, the first aim of this study was to assess the consistency and pattern (if any) of the items making up the Modified Attitudes about Aggression in Dating Situations measure (MAADS), through an exploratory factor analysis.

Based on the content of the AADS with added items (MAADS), three latent factors were anticipated to be present in this instrument, one reflecting physical aggression, another for verbal threats of violence and a third for psychological abuse. These predicted factors reflect the definition of intimate partner violence outlined by the CDC (Saltzman, Fanslow, McMahon, &

Shelley, 2002). While there are no existing measures which conform fully to the CDC definition of teen dating violence, factor analyses of various measures of TDV have produced some factors related to specific TDV components, like physical aggression (Slep et al., 2001). Slep et al. (2001), factor analyzed two attitudinal measures, the Attitudes about Aggression in Dating Situations (AADS) scale and the Justification of Verbal / Coercive Tactics scale (JVCT), and compared the results with the widely utilized Attitudes toward Intimate Partner Violence (AIV). The original AADS produced three factors: male aggression, female aggression and peer aggression. These factors were significantly related to AIV male and female aggression scores. The JVCT also produced factors for male and female verbal aggression, jealous tactics, and control tactics. These factors only modestly correlated with AIV female and male aggression and likely reflect the different types of attitudes measured.

Secondly, applying a socio-ecological perspective, contextual influences of youth's attitudes toward TDV were examined. Structural equation models were utilized in the analysis. The relation between both person factors (components of self-control and parental supervision) and contextual factors (neighborhood disorganization and extracurricular involvement) were examined.

Two models of the influence of contextual factors and proximal process on adolescent attitudes toward TDV are proposed in this study:

A. The first was a general model, Model A (Figure 1), which assumed that all factors were interrelated, and assessed the relationship between factors and attitudes toward TDV. In the first model, seven factors (neighborhood disorganization, extracurricular involvement, parental supervision, and four low self-control subscales, low frustration tolerance, self-centeredness, impulsivity, and risk seeking) were examined for their role

in adolescent attitudes about TDV. The strength and direction of the relationship among latent factors were analyzed. High neighborhood disorganization and low self-control were hypothesized to be positively associated with more tolerant attitudes toward TDV, whereas extracurricular involvement and parental supervision were hypothesized to be negatively related to tolerant attitudes to TDV.

B. The second model, Model B (Figure 2) reflected the possible mediating relationship of low self-control constructs between attitudes toward TDV and external factors in adolescents' lives, looking specifically at neighborhood disorganization, extracurricular involvement and parental supervision. As Muraven and Baumeister (2000) proposed, high stress, such as experienced by adolescents who have more neighborhood disorganization, and limited involvement in extracurricular activities or with parents, places greater demand on individual resources of self-control. Consistent with the ego-depletion model of self-control (Schmeichel et al., 2003), greater burdens of stress limit regulation of behavior, resulting in more impulsive actions. Alternatively, greater support from neighborhoods, and more prosocial and positive parental involvement, were predicted to be associated with higher self-control. The degree of self-control that individual adolescents have was predicted to influence their attitudes toward TDV. The proposed reasoning that assessment of self-control capacity was related to attitudes toward TDV relies on the theory of cognitive dissonance. Individuals with low self-control were predicted to be more likely to engage in impulsive TDV as one indicator of poor coping. Rather than holding attitudinal beliefs which conflict with their behavior (engaging in TDV) they should endorse more tolerant attitudes toward TDV.

CHAPTER 2 METHOD

Participants

Data were collected as part of a larger study of intimate partner violence; the SHARE study "Strengthening Supports for Healthy Relationships: A Gender-Sensitive, Mixed Methods Analysis of Risk and Protective Factors for Intimate Partner Violence" (Collaborative Agreement: 5U01CE002115-02). In collaboration between the Centers for Disease Control, Wayne State University, and Eastern Michigan University (Principal Investigators: Poco Kernsmith, Joanne Smith-Darden and Roger Kernsmith), this study's overarching objective was to identify perpetration risk and protective factors associated with Intimate Partner Violence (IPV). Specifically, the SHARE study seeks to investigate risk and protective factors for perpetration of physical, emotional, and sexual abuse, and stalking in adolescent romantic relationships in the individual, relational, community, and social arenas via a gender-sensitive, developmental perspective. Furthermore, the SHARE study examines school policy, procedures, and student services utilized by participating school districts to address adolescents' IPV attitudes and behavior.

After an initial recruitment of seven school districts representing nineteen individual schools, adolescents from six school districts and thirteen individual schools in a single southeast Michigan county ultimately participated in the study. A stratified sample was obtained by recruiting school districts based on level of concentrated disadvantage, such that low, middle, and highly disadvantaged schools were represented. The index of concentrated disadvantage was developed using publically available crime data and six community indicators of violent crime (percent poverty, single-headed female households, minorities, rental housing and unemployment) from the Michigan State Police Department, in a similar methodology with previous studies

(Foshee et al., 2007). School district administration gave permission for the research to be conducted in their schools over a four-year period. Through extensive coordination with principals and district superintendents, research team members mailed packets containing an introductory letter and information sheet to all 6th and 9th grade parents describing the study and explaining a passive consent process; specifically, parents could elect to "opt-out" their children by contacting the school or SHARE researchers, or returning a letter to their respective schools or to the SHARE team.

The paper and pencil survey was designed by the PIs in collaboration with their CDC scientific team to incorporate validated scales (with some modifications) to assess constructs under investigation. In addition to general demographic items (age, grade, academic performance, extracurricular activities, ethnicity and family composition), the survey focused on eight components: intimate partner violence, societal influence, community context, social engagement, normative cognitions, self-control, trauma exposure, and social desirability.

Efforts were made to ensure a representative sample was obtained. One hundred participants and 10-15 "alternates" (total N of 1300) from each school were selected using a computer-based random number generator, after excluding those who opted-out. In the first year, 1236 adolescents completed the survey; 48% of the sample was in the sixth grade and 52% in the ninth grade; 52% were female (one did not indicate their gender). Participants received a $15 gift card for completion of the survey during year one, $20 during year two and were given $25 gift cards upon completion of surveys in the third and fourth year of the study. This project was limited to data from those participants who were included in the first wave of the larger study. Eligible adolescents were and are assented at the time of survey administration. In addition, adolescents

are informed that they can skip questions they are not comfortable answering, and that they are able to choose to end the survey at any time.

Measures

The full survey was composed of 49 scales and additional demographic questions. On average, the survey took approximately an hour to an hour and a half to complete. This dissertation focused on data from a subset of the measures included in the full survey, as detailed below. In addition to the measures included in this analysis, adolescents completed numerous other questions pertaining to TDV, societal influence, community context, social engagement, normative cognitions, self-control, trauma exposure, and social desirability. Demographic information concerning age, gender, grade, ethnicity, family dynamics, grades, and extracurricular involvement were also gathered. Specific scales of interest to this investigation are described below.

Teen dating violence attitudes. A modified version of the Attitudes about Aggression in Dating Situations Scale (MAADS) was used to assess the degree to which adolescents perceive TDV to be acceptable behavior (Slep et al., 2001). The original AADS consisted of 12 items that describe a number of dating aggression scenarios, featuring male-to-female, female-to-male, and same-gender violence. Respondents were asked to describe the degree to which they agreed or disagreed with the aggression detailed in each scenario. The original AADS has been shown to demonstrate appropriate psychometrics via test-retest and factor analytic procedures; development analyses demonstrated adequate psychometric properties, with internal consistencies ranging from 0.79 to 0.87 and test-retest reliabilities from 0.57 to 0.74 (Slep et al., 2001). More recent research using this measure reported internal consistencies ranging from 0.79 to 0.87 (Muñoz-Rivas, Graña, O'Leary, & González, 2007) and 0.69 to 0.73 (Woodin, Caldeira, & O'Leary, 2013), depending

on the participant's gender. This study expanded the original 12 items to 33. These new items covered verbal aggression, relational aggression and passive aggression, beyond the original focus on physical aggression acceptability. The inclusion of such items was intended to more broadly assess all aspects of dating aggression. See Appendix A for the full scale.

Neighborhood disorganization. The Neighborhood Disorganization scale (Thornberry, Krohn, Lizotte, Smith, & Tobin, 2003) was used to assess perceptions about community violence, crime, racial tension, deterioration and safety. The measure included seventeen items with reported internal consistencies of $\alpha = 0.73$ (Winstanley et al., 2008) to $\alpha = 0.95$ (Thornberry et al., 2003). Adolescents responded on a 3-point scale as to whether issues, such as unemployment, were "Not of a problem", "Sort of a problem", or "A big problem" for their family. See Appendix B for the full scale.

Parental supervision. The Seattle Social Development Project Parental Supervision Scale (Arthur, Hawkins, Pollard, Catalano, & Baglioni, 2002) was used to assess parental supervision. This scale measured the adolescents' perceptions of their parents'/guardians' awareness and involvement through questions such as: "When I am not at home, one of my parents know where I am and who I am with." The scale included 6 items answered on a four-point Likert scale and has demonstrated good internal consistency ($\alpha = 0.80 – 0.87$). See Appendix C for the full scale.

Extracurricular and community involvement. Six questions were used to assess adolescents' involvement in extracurricular and community organizations. Specifically, adolescents responded to yes/no questions whether they were involved in sports, clubs, foreign language and other community activities. Adolescents were asked to describe their participation in both outside of school or school-related contexts. See Appendix D for this measure.

Self-Control. Four subscales of the widely used Low Self-Control scale (DeLisi, Hochstetler, & Murphy, 2003; Grasmick, Tittle, Bursik, & Arneklev, 1993; Pratt & Cullen, 2000) were used to assess self-control problems. These subscales included: Low Frustration Tolerance, Self-Centeredness, Impulsivity, and Risk Seeking. Questions generally addressed impulsive behavior, e.g. "I often act on the spur of the moment without stopping to think;" risk taking, e.g. "I sometimes find it exciting to do things for which I might get in trouble;" selfishness, e.g. "I try to look out for myself first even if it makes things hard for other people;" and difficulty controlling anger, e.g. "When I am really angry, other people better stay away from me." Each subscale was composed of 4 items answered on a 4-point Likert scale. The observed composite alpha of individual subscales ranged from .63 to .78. See Appendix E for the full scale.

Procedure

Adolescents completed first wave surveys between February and May of 2013. Each school notified their adolescents the day of the survey. Additionally, if an adolescent had a cell phone, a reminder text or phone call was placed the day before administration took place. Surveys were administered on a primary date, followed by two alternate dates for participants absent on the primary date. In general, care was taken to ensure that support was available to adolescents who could have had adverse reactions to the content found in the survey materials inasmuch as a social worker was always present during every survey administration.

Analysis

All data were screened for skew, kurtosis, normality, univariate and multivariate outliers. The amount of missing data was investigated and dealt with depending on the percentage of data found to be missing and possible patterns to their values.

Since the MAADS was expanded to include non-physical aspects of teen dating aggression, an exploratory factor analysis using principal axis factoring with oblique rotation, which allows correlation of the factors and analyzes shared variance, was conducted to assess pattern of responses to the items. Factors were assessed via Eigen values greater than 1, visual analysis of the scree plot, and consistency of item loadings. The internal consistency of each identified latent factor was calculated and reported.

Structural equation modeling. Initially, confirmatory factor analyses (CFA) were performed on each individual scale, specifically the MAADS, Neighborhood Disorganization, Parental Supervision, and Low Self-Control scales. This analysis provided evidence to support the validity of the measurement model of each scale by evaluating items for consistency and meaningful loadings on the latent factors. Adequate model fit of the measurement model was assessed with the Root Mean Square Error of Approximation (RMSEA), the Tucker Lewis Index (TLI), the Comparative Fit Index (CFI), and the achieved chi-square. Analyses were performed first with all items as indicators. After first using all items, some scales were parceled, by averaging item responses, to reduce the number of items necessary for use in the full model. These newly parceled scales were also assessed with CFAs.

Next, using the parcels and items supported by the individual CFAs, the measurement model of the full model (Model A) was assessed via a CFA for appropriate fit and consistency of item loadings. Once this measurement model was determined to have achieved suitable fit and consistency, the structural model of Model A was evaluated for significant relationships between latent factors. Next, the structural model of Model B was evaluated for significant relationships between latent factors. Finally, to assess the stability and strength of indirect relationships found in the mediation model (Model B), adjustments were made to the mediation model (Model B)

based on the structural relationships identified in Model A. This produced a second mediation model (Model C), which was evaluated for significant direct and indirect relationships between latent factors, and the overall fit of Model C was compared to Model B.

To address the hypothesis that low self-control was positively related to greater acceptability of TDV, the structural model assessed the strength and direction of the relationships between the latent factors. The latent factors, corresponding with the results of the factor analysis of the modified Attitudes about Aggression in Dating Situations Scale, Neighborhood Disorganization, Parental Supervision, Extracurricular Involvement, and four selected scales from the Low Self-Control measure provided the basis for the structural models.

Model A (Figure 1) examined whether factors were each separately associated with TDV attitudes. The seven factors, Neighborhood Disorganization, Parental Supervision, Extracurricular Involvement, and Low Self-Control constructs, Low Frustration Tolerance, Self-Centeredness, Impulsivity, and Risk Seeking, were allowed to correlate and their direct relationship to TDV attitudes was assessed. Model B (Figure 2) assessed the possible partial mediating role of Low Self-Control constructs between TDV attitudes and the three other variables.

The fit of Model B to Model C were compared directly via a chi-square difference test. Since the models were nested, changes in chi-square were a result of the differences in the proposed paths among the latent variables. The strength and structure of the mediation relationship was assessed by calculating the strength and statistical significance of the direct and indirect effects of environmental variables on attitudes toward TDV (Figure 2 and 3).

CHAPTER 3 RESULTS

Preliminary Data Screening

A total of 1,236 adolescents participated in the survey. The following six scales, or groups of items, were evaluated for analyses: 1. The MAADS, 2. The Neighborhood Disorganization scale, 3. The Parental Supervision scale, 4. The Prosocial Involvement scale, 5. The Extracurricular Demographic items, and 6. The Low Self-Control scales. These six item groups were averaged and evaluated for missing data, skew and univariate outliers by assessing histograms of their total means and z-scores of the mean totals greater than 3.29. Only a small fraction of the respondents had missing values (see Table 1).

Using a standard for evaluating skew with large samples, specifically skew statistics greater than 2 and/or a kurtosis values greater than 7, none of the scales were elevated (West, Finch, & Curran, 1995) (see Table 2). Descriptive statistics of the measures are shown in Table 3.

Individual items were evaluated for skew greater than 2. The MAADS had 5 items (15%) with substantial skew. No items had kurtosis scores greater than 7. The Parental Supervision scale items were not skewed or kurtotic. The Neighborhood Disorganization scale had 8 items (33%) with substantial skew. No Neighborhood Disorganization items had severe kurtosis. None of the items from the Low Self-Control scale were skewed or kurtotic.

Examination of the mean scale values revealed univariate outliers for the following measures. The MAADS had 6 problem responders with scores above 3.29. Due to their scarcity, these values were included in analyses. The Neighborhood Disorganization scale had 20 values greater than 3.29, however, most were close to 3.29 and likely represented genuine extremity in responses. Therefore, they were not removed. The Parental Supervision scale and the Low Self-Control scales both had only 3 scores classified as outliers. These were not eliminated, due to their

scarcity. The Extracurricular Involvement items were not evaluated for outliers because their distribution was not expected to be normal, due to the nature of the count variable.

Univariate outliers of individual items were also assessed. Analyses revealed 18 MAADS items had univariate outliers; the item with the most outliers (68) had z-scores of 3.3, and the item with the fewest outliers (10) had z-scores of 4.6. Due to their relative scarcity and apparent authenticity of responding, all outliers were included in subsequent analyses.

Factor Analysis of the MAADS

An exploratory factor analysis with Primary Axis Factoring and oblimin rotation was performed on the MAADS using SPSS 22. Missing values were replaced with the mean. While evaluation of the correlation matrix revealed several correlations (the highest being $r = .64$), no collinearity was found. The largest correlations were between the final four items. The initial factor analysis produced 5 factors with eigenvalues greater than 1. This solution explained 52% of the extracted variance and a few items had extraction levels that were less than .3, indicating poor fit with their identified factors.

Based on the results of the first factor analysis, two items were deleted, the single item that loaded on the fifth factor and another because of low extraction. A second factor analysis with Primary Axis Factoring and oblimin rotation with mean replacement was performed. This resulted in a four factor solution based on eigenvalues greater than 1, which explained 51% of the variance. To identify common themes of factors, item content was evaluated (see Table 4). Factor 1 had 12 items that loaded above .3 and appeared to reflect Very Unacceptable behavior in dating relationships. These items had the lowest overall means, indicating that on average, respondents found these items the most unacceptable. Other than this, item content was diverse, including cyber aggression, physical aggression and verbal aggression. Factor 2 had 7 items load above .3, as in

the first factor analysis, and seemed to reflect Moderately Unacceptable behavior. This factor also was composed of items describing a variety of aggressive acts, but on average item means were higher (indicating more accepting attitudes) than those on the first factor. In addition, Factor 2 items described aggressive acts such as female physical aggression, which might have been considered less serious due to the typically smaller stature of females compared to males, or provoked aggression, where actions had some element of attempted restraint by the actor. Factor 3 had 7 items load above .3 and reflected Verbal Aggression and belittling by both genders. Factor 4 had 5 items load above .3 and contained items pertaining to intrusive monitoring and checking behavior.

Conclusions from Factor Analysis

Based on these results, there appeared to be four consistent factors of the MAADS. A large portion of variance was still unexplained (49% unexplained by four factors). Factor 1, which explained the largest portion of variance, was composed of items that were generally rated as "Very Unacceptable" behavior in dating relationships. Factor 2 had a consistent theme of physical aggression, primarily by female aggressors, but these items were rated as "Moderately Unacceptable." In addition, Factor 2 was composed primarily of items from the original AADS. The final factors had consistent themes; Factor 3 contained items related to "Verbal Aggression," and Factor 4 contained items related to intrusive "Checking Behavior." However, Factor 3 and 4 explained a small portion of the variance in the solution. Reliability of these factors, as assessed by internal consistency, ranged from moderate to very high (Cronbach's α ranged between .76 - .91) (Schmitt, 1996).

Structural Equation Modeling

Confirmatory factor analyses (CFA) and structural equation modeling (SEM) with maximum likelihood estimation were performed with Mplus Version 7.31 (Muthén & Muthén, 2012). Fit indices used to assess overall fit included the chi-square goodness of fit statistic (χ^2), the Tucker Lewis index (TLI), the Comparative Fit index (CFI), and the root mean square error of approximation (RMSEA). Hu and Bentler (1999) suggested that a model has good fit when RMSEA is below .08, CFI is at or above .95 and TLI is above .90.

Individual scale confirmatory factor analyses. In order to achieve the best measurement model fit, confirmatory factor analyses were run on each individual measure/scale to assess overall consistency.

The MAADS was addressed first. A four factor model based on the factor analysis produced a model with reasonable fit (RMSEA = 0.06, TLI = 0.88, CFI = 0.89, χ^2 (428) = 2157.95) and all items loaded significantly on their latent factors (see Figure 1). The large number of items on individual latent factors posed a potential obstacle to achieving good fit in the full model confirmatory factor analyses and SEM. The twelve items of the first factor were averaged in groups of three to form four parcels. The resulting analysis improved model fit somewhat, and this model was used in the full model analysis (RMSEA = 0.06, TLI = 0.90, CFI = 0.91, χ^2 (224) = 1223.58).

The Neighborhood Disorganization factor had moderate fit (RMSEA = 0.09, TLI = 0.90, CFI = 0.91, χ^2 (119) = 1311.99) and all items loaded significantly. To improve fit, these items were randomly averaged in groups of 2 to form 8 parcels. This improved some fit indexes, and the parceled solution was used in the full model analysis (RMSEA = 0.10, TLI = 0.96, CFI = 0.97, χ^2 (20) = 273.40).

The Parental Supervision scale had moderate fit (RMSEA = 0.09, TLI = 0.91, CFI = 0.95, χ^2 (9) = 91.22) and all items loaded significantly. In the full SEM model, the six Parental

Supervision scale items were averaged in pairs to create three parcels. However, this model was not evaluated with a CFA because it would produce a just identified model.

The CFA of the four latent Low Self-Control scales had moderate fit (RMSEA = 0.06, TLI = 0.89, CFI = 0.91, χ^2 (98) = 535.87), and all items loaded significantly on their latent factors. The Extracurricular Involvement items were not evaluated through a CFA because with only three items it would produce a just identified model.

Full model confirmatory factor analyses. In order to assess the success of the full model, a confirmatory factor analysis was performed with the four factors of the MAADS, four Low Self-Control factors, Neighborhood Disorganization, Extracurricular Involvement and Parental Supervision latent variables. Some items were parceled to improve overall fit, as described above (See Figure 1). All the latent constructs were correlated with at least one other construct. Extracurricular Involvement was only significantly negatively correlated to Impulsivity. Parental Supervision was negatively correlated with all latent constructs, except Extracurricular Involvement. Neighborhood Disorganization was positively correlated with all latent constructs, except Extracurricular Involvement and Moderately Unacceptable behavior. All other latent constructs were positively correlated with one another.

Simple model (Model A). There were two models evaluated, a simple model where exogenous factors predicted the four factors from the MAADS (Figure 2), and a mediation model where the Low Self-Control factors were evaluated as mediators of the relationship between exogenous factors and the MAADS factors (Figure 3). Parceled items were used in both models. The simple model produced good model fit (RMSEA = 0.04, TLI = 0.91, CFI = 0.92, χ^2 (1270) = 3433.54). All items loaded significantly on their latent factors (see Table 5). Factor 1, reflecting Very Unacceptable dating behavior, had significant positive pathways from Self-Centeredness

Self-Control and Neighborhood Disorganization, and significant negative pathways from Parental Supervision and Risk Seeking. Factor 2, reflecting Moderately Unacceptable behavior, had significant positive pathways from Low Frustration Tolerance and Risk Seeking, and significant negative pathways from Parental Supervision and Neighborhood Disorganization. Factor 3, reflecting Verbal Aggression, had significant positive pathways from Self-Centeredness and Neighborhood Disorganization, and a significant negative pathway from Parental Supervision. Factor 4, reflecting Checking Behavior, had significant positive pathways from Low Frustration Tolerance, Self-Centeredness and Neighborhood Disorganization, and a significant negative pathway from Parental Supervision.

Mediation model (Model B). The mediation model produced moderate to good model fit (RMSEA = 0.04, TLI = 0.89, CFI = 0.90, χ^2 (1288) = 3985.31). These results support evidence of mediation in select direct and indirect paths. Some individual indirect effects were significant. Specifically, Parent Supervision and Neighborhood Disorganization showed significant indirect effects to the four MAADS factors through the four Self-Control factors. However, the significant indirect pathways varied, both in the Self-Control factors they passed through, and the TDV attitude factors that were significant. For instance, Parental Supervision had significant pathways through Self-Centeredness and Low Frustration Tolerance to the Very Unacceptable factor, while its path to the Moderately Unacceptable factor passed through Risk Seeking and Low Frustration Tolerance.

Adjusted mediation model (Model C). One concern was whether indirect effects would remain if direct paths were included in the mediation model. To address this, two mediation models were analyzed and compared; the first (Model B) had no direct paths between exogenous predictors and the MAADS, while the second included direct paths from exogenous predictors. These direct

paths were selected because they were significant in the simple model (Model A). The direct paths were: Parental Supervision to all four MAADS factors and Neighborhood Disorganization to Verbal Aggression and Checking Behavior factors (see Figure 4). Like Model B, Model C also showed moderate to good fit (RMSEA = 0.04, TLI = 0.89, CFI = 0.90, χ^2 (1282) = 3949.11), and when the two are directly compared, Model C was a significant improvement (χ^2 (6) = 36.20, $p < .01$). In Model B, Parental Supervision showed significant indirect effects to all four dating aggression attitudes factors. In the second mediation model (Model C), Parental Supervision no longer showed significant indirect effects for the Very Unacceptable or Verbal Aggression factors. There were unique relationships between each individual MAADS factor and process and contextual factors (see Tables 8 and 9).

Very Unacceptable. In Model B, Parental Supervision showed significant indirect pathways to Very Unacceptable via Self-Centeredness and Low Frustration Tolerance. Neighborhood Disorganization had a positive indirect pathway to Very Unacceptable through Self-Centeredness alone. In Model C, the only significant indirect effect to the Very Unacceptable factor was from Neighborhood Disorganization via Self-Centeredness.

Moderately Unacceptable. In Model B, both Parental Supervision and Neighborhood Disorganization had significant indirect effects to Moderately Unacceptable. In Model C, the only significant indirect effect to the Moderately Unacceptable factor was from Parental Supervision. Parental Supervision showed negative indirect pathways to Moderately Unacceptable through both Risk Seeking and Low Frustration Tolerance.

Verbal Aggression. In Model B, both Parental Supervision and Neighborhood Disorganization showed significant indirect pathways to Verbal Aggression. In Model C, no significant indirect effects were observed to the Verbal Aggression factor.

Checking Behavior. Finally, in both Model B and C, Parental Supervision and Neighborhood Disorganization showed significant indirect effects to the Checking Behavior factor. However, in Model B Parental Supervision showed negative indirect pathways to Checking Behavior through both Self-Centeredness, Low Frustration Tolerance and Risk Seeking, but in Model C Risk Seeking was no longer a significant indirect pathway. In Model B, Neighborhood Disorganization showed positive indirect pathways to Checking Behavior through both Low Frustration Tolerance and Self-Centeredness. However, in Model C the indirect pathway from Neighborhood Disorganization to Checking Behavior was only significant through Low Frustration Tolerance.

These findings strengthen the case for partial mediation of dating aggression attitudes by Parental Supervision and Neighborhood Disorganization. It also provides compelling evidence that the identified dating aggression attitudes are distinct and associated with different environmental and self-control constructs.

CHAPTER 4 DISCUSSION

This study investigates middle and high school adolescents' attitudes about teen dating violence (TDV), and assesses the relationship between attitudes about TDV and parental supervision (attention), neighborhood disorganization, extra-curricular activities, and self-control, consistent with Bronfenbrenner's socio-ecological model (Bronfenbrenner, 1977). Specifically, our findings add to our understanding of TDV attitudes by identifying distinct TDV attitude types. Further understanding of these TDV attitudes were investigated via their relationships with environmental (extracurricular involvement, neighborhood disorganization, and parental supervision) and personal factors (self-control). Finally, theories of TDV attitudes were tested, and somewhat supported, via the pattern of direct and indirect relationships between TDV attitudes and environmental factors.

First Aim: Factor Structure of TDV Attitudes

The first aim was to assess the consistency of the MAADS (Modified AADS) items through an exploratory factor analysis. Based on the content of the MAADS and a review of the TDV literature, it was hypothesized that the factor analysis would produce a three factor solution, reflecting three of the four CDC elements of intimate partner violence: physical aggression, verbal aggression and psychological aggression (Centers for Disease Control and Prevention, 2016; Cutter-Wilson & Richmond, 2011; Saltzman et al., 2002). While we did not find a three factor solution as predicted, our four factor solution largely reflected the anticipated factors. Two factors closely matched the anticipated distinction between verbal and psychological aggression: one reflected verbal abuse and belittling behavior, while the other was composed of intrusive checking and controlling behavior items. Additionally, all the physical aggression items loaded on two factors, suggesting some support for the anticipated physical aggression factor. However, these

factors were not composed purely of physical aggression items, and they also differed in important ways that will be discussed further.

While no single factor was composed solely of physical aggression items, all physical aggression items were confined to two factors, but these two factors also included items describing psychological, verbal, and cyber aggression. The heterogeneity of item content suggested that attitudes were clustered by their perceived severity rather than type of behavior.

These results add to our understanding of TDV attitudes, successfully addressing the first aim, as these results differed from previous studies. It was expected that the factor analysis would produce a different factor structure than the original measure, since the SHARE study added new items to the original scale, but the present findings provide further insight into the findings of the original measure. The original AADS by Slep et al. (2001) identified a three factor structure, reflecting Female Aggression, Male Aggression and Peer Aggression. Slep et al. (2001) posited that such a gender specific factor structure was due to distinct attitudes for male to female and female to male aggression. Our analysis produced four factors that were generally *unrelated* to gender of the perpetrator. The very unacceptable TDV construct contained many of the original male aggression on female victim items, but also included cyber aggression and verbal aggression items. Items composing this construct also had the lowest overall means, suggesting the majority of adolescents viewed these behaviors as very inappropriate and strongly disapproved of them. The items on the moderately unacceptable TDV construct had higher means, indicating that adolescents tended to perceive them as relatively less objectionable than the very unacceptable TDV construct. The moderately unacceptable construct contained all of the original female aggression on male victim items, but also included male aggression on female victim items that were judged as less severe (e.g., a boy is about to be hit by a girl but instead pushes her away).

This pattern suggests that there are may not be distinct attitudes towards male and female dating violence perpetration as observed by Slep et al. (2001). Instead, raters distinguish between the acceptability of aggression, rather than differentiating by the gender of the aggressor. Furthermore, the sample used in the Slep et al. (2001) was similar to the SHARE study. Slep et al. (2001) participants were 2000 high school students from seven schools from a single New York county, representing an ethnically diverse sample. The SHARE study sample was from a single Michigan county and was ethnically diverse, however participants were from both middle and high schools.

Interestingly, this distinction between severe and moderate aggression was also found by the STRiV study (Taylor & Mumford, 2016) factor analysis, though they used a modified version of the Conflict in Adolescent Dating Relationships Inventory (CADRI). This inventory assessed reported TDV behavior (perpetration and victimization) rather than TDV attitudes. Nonetheless, factor analyses found separate factors for moderate (1) and severe (2) psychological abuse, and moderate (3) and severe (4) physical abuse. This suggests that there are areas of dating behavior that are judged to be unacceptable by most people. There are some behaviors, however, that are somewhat more equivocal – and therefore judged to be less repugnant. For example, ***pushing*** and ***slapping*** as a response to humiliation was viewed as an acceptable response by many respondents. Future prevention efforts in early dating relationships could do well to address thresholds for aggression in these ambiguous circumstances, thus establishing protective norms for romantic relationships.

Why might some items be judged as relatively more acceptable? We find that while male to female aggression tends to be viewed as more serious and objectionable, it is not due to "maleness" per se but rather the greater potential harm of the aggressor that dictates severity. The attitude that female aggression is less severe or less unacceptable than male aggression is supported

(Black et al., 2015; Simon et al., 2001). Male aggression is more unacceptable because men (and adolescent boys) are bigger, stronger, and more likely to cause greater injury (Molidor & Tolman, 1998; Simon et al., 2001). However, it appears to be the judgment about the acceptability of the aggressive act that separates views of male from views of female perpetration.

Although TDV attitudes tended to be split based on level of unacceptability rather than perpetrators gender, there were instances where similar types of perpetration were viewed as less acceptable when perpetrated by a boy, for instance this item loaded on the Very Unacceptable construct: "Karen is teasing Frank at a party about being too stupid to pass English. When she won't stop. Frank just loses it and hits Karen." The fact that female physical abuse perpetration tended to be judged as relatively less unacceptable is consistent with the TDV literature. Girls report higher rates of physical abuse perpetration than boys (Glass et al., 2003; Hickman et al., 2004; Muñoz-Rivas et al., 2007; O'Leary & Slep, 2012; Smith et al., 2015; Taylor & Mumford, 2016). Female aggression may be an important target of intervention / prevention. In general, female physical aggression is considered less severe (Archer, 2000; Black et al., 2015; Wekerle & Wolfe, 1999). Boys are also more tolerant of aggression in relationships, though this is also tolerated with peers (Molidor & Tolman, 1998). Consequently, targeting female physical aggression in prevention efforts may be fruitful in changing attitudes.

Second Aim: Direct Associations

The second aim of the study assesses the relationships between TDV attitudes and contextual and self-control constructs. The simple SEM results (Model A) found that dating aggression attitudes did indeed have distinct relationships with extracurricular involvement, neighborhood disorganization, parental supervision, and low self-control constructs. For the most part, these relationships were consistent with our hypotheses: greater neighborhood

disorganization and low self-control were positively related to more tolerant TDV attitudes, and high parental supervision was negatively related to TDV attitudes. However, the extracurricular involvement construct was not related to TDV attitudes.

It is surprising that the extracurricular involvement construct was not directly related to any TDV attitudes. The research literature suggests prosocial involvement is a protective factor for many risk factors, including risky behavior and poverty (Eccles & Barber, 1999; Fergus & Zimmerman, 2005). The lack of influence may mean that children involved in extracurricular activities are just as vulnerable to TDV as those not involved. In fact, in prior research, extracurricular involvement has, at times, been associated with worse outcomes, including drinking and fighting (Eccles et al., 2003; Linville & Huebner, 2005). Consequently, outreach to middle and high school sports teams and clubs would likely be beneficial as well as convenient. Alternatively, another possibility is that participation in some extracurricular activities, especially those with anti-social peers, might actually promote TDV attitudes. The extracurricular involvement construct items did not specify the type of activity, so if some activities are protective and while others are risk factors the overall effect would not be detected. The extracurricular involvement construct may not influence TDV attitudes, but it was associated with lower impulsiveness, so these prosocial activities do appear to be beneficial (Eccles et al., 2003).

The relationships between TDV attitudes and environmental and self-control constructs provided support for the interpretation of TDV attitudes as four separate entities, previously identified in the factor analysis. While the items may separate into four factors through a factor analysis, these factors become conceptually meaningful if they are uniquely associated with specific contextual and self-control constructs. For instance, examples of very unacceptable TDV were associated with greater self-centeredness. On the other hand, uncontrolled and less severe

dating aggression was associated with short temperedness and a greater propensity to engage in risky behavior.

These findings justify addressing the types of TDV (physical, verbal, psychological and sexual) separately in future research, prevention and intervention efforts. Historically, research and prevention of TDV and IPV has focused on physical aggression. While clearly important, psychologically controlling behavior, threats, and anger are also very destructive to relationships (Coker et al., 2002) and are as prevalent as physical abuse (Thompson et al., 2006). Future prevention research may benefit from explicitly measuring and addressing verbal abuse, controlling behavior, and physical aggression individually. Furthermore, in recent years the advent of social media has facilitated online bullying and cyber dating aggression (Borrajo et al., 2015; Korchmaros et al., 2013; Zweig, Dank, Lachman, & Yahner, 2013), as well as sexting behavior in dating relationships (Lucero et al., 2014; Mitchell et al., 2012). Middle and high school youth already report victimizing and perpetrating TDV via technology (Borrajo et al., 2015; Lucero et al., 2014; Stonard et al., 2014). Future TDV surveys should include items describing specific types of TDV, especially abuse perpetrated via technology.

Direct relationships between environmental variables and TDV attitudes were noteworthy. The most consistently influential construct was parental supervision. In the simple SEM model, adolescents with higher parental supervision were less tolerant of all forms of TDV. This was consistent with our hypothesis and the literature, which identified parental supervision as a protective factor for TDV (Arriaga & Foshee, 2004; Leadbeater et al., 2008; Meeus et al., 2007), and parental conflict as a risk factor (Kinsfogel & Grych, 2004; Vagi et al., 2013).

The strong influence of the parental supervision construct suggests that parental interventions may be particularly influential in mitigating TDV attitudes. Currently, prevention

campaigns, like Love is Respect and Break the Cycle, provide advice to parents about initiating conversations with children about dating, but our study suggests that it may be helpful to also inform parents on the benefits of awareness of youths' activities. Providing education to parents about the different types of TDV, especially less familiar verbal abuse, stalking, and controlling behavior, will also be crucial.

Each of the four self-control constructs showed distinct relationships with specific TDV attitudes, indicating that self-control subtypes are different from one another and do not correspond to a single unidimensional factor, as was hypothesized. Self-centeredness was the self-control construct that appeared to be most strongly associated with TDV. Self-centeredness was positively associated with severe dating abuse, as well as verbal aggression and intrusive monitoring of one's dating partner. It is clear that if a dating partner reports selfishness and preference for oneself over others, it is a cause for concern. Self-centeredness has been associated with greater aggression and lower empathy (McCloskey & Lichter, 2003), as well as greater sexual aggression in adult men (White, McMullin, Swartout, Sechrist, & Gollehon, 2008). This lack of empathy is also seen in narcissistic and self-centered adult male batterers, who tend to view their partners as objects (Holtzworth-Munroe & Stuart, 1994). In adult relationships, one primary motivation of perpetrators is for power/control over a romantic partner (Elmquist et al., 2014). Perhaps self-centeredness in adolescents is a precursor to this attitude in adulthood.

Another important feature of self-centeredness items is that they describe self-control in the respondent's relationships "with other people." While other self-control constructs focused on individual behaviors, like "I act on the spur of the moment…", self-centeredness focuses on respondents' their interpersonal motivations. In that respect, it is a social aspect of self-control, not an executive function or attention ability. Since TDV is fundamentally interpersonal, it is

understandable that an interpersonally-focused self-control construct would be significantly related to more tolerant attitudes toward TDV.

The concept of self-centeredness is not often studied in conjunction with TDV, so these findings are rather novel. Prevention and intervention efforts have found self-centeredness challenging to address, but some evidence suggests that mindful meditation can be beneficial (Dambrun & Ricard, 2011), as well as involvement in the community (Smetana, Campione-Barr, & Metzger, 2006), and in general improving compassion for oneself (Barnard & Curry, 2011).

The other self-control constructs, risk-seeking, low-frustration tolerance and impulsivity, were consistently associated with a single aspect of TDV: moderately unacceptable TDV. Somewhat unexpectedly, impulsiveness was negatively related to moderately unacceptable TDV in SEM analyses. However, in the initial CFA analysis, impulsiveness was positively correlated with moderately unacceptable TDV. Nonetheless, the pattern of individual/personal self-control problems significantly associated with the moderately unacceptable TDV construct is consistent with our expectations. Adolescents who have trouble controlling their anger, are more comfortable taking risks, and have impulse control problems, are more tolerant of TDV that is less objectionable. This finding appears to be consistent with the hypothesis of cognitive dissonance; specifically that in striving for consistency between beliefs and behaviors, adolescents with poor self-control adjust their interpretation of what is appropriate to include more aggressive and impulsive behavior in dating relationships.

Third Aim: Indirect Associations

The third aim of the study was to assess the suitability of a mediation model with indirect relationships between environmental constructs and dating aggression attitudes via self-control. This model reflected the Bronfenbrenner socio-ecological model. Mediation models successfully

identified significant indirect relationships from environmental factors to three of the four TDV attitude constructs. Only the verbal abuse construct did not show an indirect relationship with a distal influence via an aspect of low self-control. Thus, there was evidence that the low self-control constructs are influenced by contextual factors, like parental supervision (attention) and neighborhood disorganization, and in turn, low self-control influences TDV attitudes.

The parental supervision construct showed a strong indirect influence on TDV attitudes, in addition to previously discussed strong direct effects. Specifically, greater parental supervision (attention) was associated with less self-centeredness and fewer problems managing frustration, which in turn were associated with less tolerant attitudes about intrusive monitoring and less severe dating aggression. This partial mediation is consistent with the influence seen in Bronfenbrenner's socio-ecological model, and again shows the significant protective influence of parental supervision.

The influence of contextual factors on individual attitudes was strongly supported by the neighborhood disorganization construct's relationships in simple and mediation models. In the simple model, neighborhood disorganization was positively related to very unacceptable, verbal and checking TDV constructs. However, in the mediation model, the role of neighborhood disorganization was limited to indirect effects via self-control. Our findings suggest that neighborhood disorganization has an indirect effect on attitudes through proximal factors like self-control. Specifically, it appears that exposure to criminal activity and lack of safety is associated with higher levels of self-interest that results in greater tolerance for the most unacceptable TDV attitudes. This is consistent with other research findings of neighborhood disorganization negatively impacting self-control (Gibson et al., 2009) as well as TDV (Caetano et al., 2010; Cunradi et al., 2000).

One possible explanation for self-centeredness' mediation of neighborhood disorganization's effects is that in neighborhoods where there is more social cohesion, adults are able to monitor and intervene in delinquent behavior, thereby reducing the influence of adolescents with personality risk factors and impulsivity problems (Meier, Slutske, Arndt, & Cadoret, 2008). Stress may also interfere with empathy (Martin et al., 2015). Consequently, neighborhood contexts that are less safe are likely more stressful for adolescents and decrease their empathy for others. Increased neighborhood disorganization indirectly was associated with greater tolerance of intrusive monitoring in dating relationships. This suggests that neighborhood interventions that decrease community stress could go a long way toward promoting empathy and affiliative relationships. Fostering neighborhood cohesion may increase adolescents' self-control capacity and decrease their tolerance for inappropriate teen dating behavior.

One of the theories that contributed to our hypothesis that self-control constructs would mediate the relationship between environmental constructs and TDV is the ego-depletion model of self-control. According to Schmeichel et al. (2003), active self-control occurs when engaged in mental activity relying on logic, extrapolation and novel idea generation. In this definition, self-control is a limited cognitive resource, and is depleted by efforts to control an emotional response, inhibit impulses, and persist in frustrating circumstances. However, not all four of our self-control constructs seem to fit with this definition of self-control; only the impulsivity, risk-seeking, and low frustration tolerance constructs seem to reflect this definition. However, the ego-depletion model acknowledges that some mental thought does not deplete this cognitive resource, such as automatic interpretation, categorization and perception. Self-centeredness items seem to reflect automatic thoughts and judgements, indicative of a schema or general attitudes rather than self-control behavior. Therefore, self-centeredness does not support the ego-depletion model as a

limited cognitive resource, and consequently our study is not entirely consistent with this model. However, the strong effects of self-centeredness in all analyses warrant its inclusion and lend support for its importance in TDV.

Analyses provided some support for the ego-depletion model of self-control, as impulsivity, risk-seeking, and low frustration tolerance mediated relationships between environmental constructs and TDV attitudes. Neighborhood problems appeared to increase stress and deplete one's self-control capacity. Neighborhood problems were positively associated with trouble managing frustration and this indirectly was associated with greater tolerance for intrusive monitoring of a dating partner. Additionally, parental supervision appeared to bolster self-control reserves. Greater parental supervision was negatively associated with poor frustration management, impulsivity and risk-taking, which indirectly decreased tolerance for moderately unacceptable TDV. The indirect influence of neighborhood disorganization and parental supervision (attention) supports the ego-depletion model, and further demonstrates the influence of these constructs on TDV.

Limitations

One limitation of our study is the use of self-report. Self-report is vulnerable to a number of influences, including social-desirability (not analyzed in this dissertation), wording of the question, vocabulary knowledge and reading ability of respondent. Self-report data for some items relied on the ability of the adolescents to accurately reflect and report their own mental states; for instance, the self-control measure asked adolescents to agree or disagree with statements like "I act on the spur of the moment without thinking." This presents a reference bias issue, as two adolescents may differ on their reported amount of impulsivity due to different personal standards of impulsivity, though they in fact have similar rates of impulsive behavior (West et al., 2015).

However, the TDV attitude measure (MAADS) does an excellent job of providing adolescents with clear reference behaviors, reducing the potential threat of reference bias for this measure.

This analysis is cross-sectional, and consequently only focuses on individual differences in TDV attitudes at a single time point. Consequently, longitudinal conclusions about developmental trajectories and within-person change are beyond the scope of this study. Future analysis of longitudinal changes in TDV attitudes may elucidate specific time-periods as ideal targets for prevention and intervention. Longitudinal research would also more rigorously assess the directional effects of our model (e.g., greater self-centeredness may result in more tolerant TDV attitudes or it may be that tolerant TDV attitudes foster self-centeredness and/or interfere with the development of empathy).

While this study describes factors with main effects reducing tolerant attitudes of TDV as "protective", this terminology is not consistent with terminology used by many researchers in the field of resilience (Trentacosta, McLear, Ziadni, Lumley, & Arfken, 2016). In both the resilience and the risk and protective factor literature, however, specific relationships between predictors and outcomes are focal. In this cross-sectional work, it could be argued that the term protective factor does not reflect the scope of the study as significant associations with better outcomes among adolescents exposed to risk over time was not assessed. In addition, protective factors also describe factors that moderate the relationship between a risk factor and the outcome (Fergus & Zimmerman, 2005). An alternative term for “protective factors” is a compensatory process, where a factor has an independent significant relationship with an outcome in the opposite direction as a risk factor (Fergus & Zimmerman, 2005). The observed relationship between parental supervision and TDV attitudes could be characterized as such a compensatory process.

Conclusions and Future Directions

In accordance with the CDC and other researchers, our study supports distinguishing between specific types of teen dating abuse. Adolescents have distinct attitudes about different types of TDV behavior. These attitudes about TDV behavior are differentiated by their unique relationships with environmental and self-control factors. This finding are particularly salient, in as much as efficacious research and prevention and intervention endeavors should be focused and TDV type specific. For example, research and epidemiological studies have paid particular attention to physical and sexual abuse. This is understandable since physical and sexual abuse can be an immediate threat to health and can be studied behaviorally through criminal justice records of rape, assault and domestic abuse. However, other types of TDV, such as psychological abuse and stalking, have larger prevalence rates, but have been less well studied. The prevalence of psychological abuse suggests that it is ripe for prevention and intervention efforts and thus warrants further study. Psychological abuse has been challenging to measure behaviorally, but instances of abuse via technology can be behaviorally measured for severity, frequency and qualitative content. Researchers and clinicians may make productive use of such data. Furthermore, social media and technology assisted communication present new arenas where psychological abuse can be perpetrated and merit increased attention by researchers, interventionists, and policy makers.

Our study indicates substantial benefits when parents pay close attention to their teens' activities. Adolescents who perceive their parents as closely monitoring their behavior, report fewer self-control problems and greater disapproval of most types of TDV. These findings suggest that prevention and intervention programs targeting parents would likely be an effective and worthy use of resource dollars. Current and previous prevention programs work to educate parents with presentations and flyers, as well as offering guidance to facilitate conversations between

adolescents and parents. Future programs should also consider adding information on the sub-types of TDV for parent education. Given the prevalence of psychological abuse and cyber and technology assisted aggression, parents need to be fully aware of the potential harm to their children.

Our data indicate that parental attention is beneficial, but there are further questions about why it is advantageous. For instance, it may be that *perception* of the adolescent that their parents are monitoring their behavior is important. This propensity to perceive parental attention may be associated with personality traits of the teen, such as anxiety, neuroticism, or conscientiousness. Consequently, future studies may verify that parent attention confers benefits by measuring both parent and teen self-reports for agreement, or measuring parental attention behaviorally in some way.

Another factor that was significantly related to multiple types of TDV was the concept of self-centeredness. Other studies have linked self-centeredness to many problems, including greater aggression and lack of empathy (McCloskey & Lichter, 2003). Our study found that self-centeredness was directly related to neighborhood problems and mediated the influence of neighborhood disorganization on TDV attitudes. This is interesting and future research may help us understand the nature of this relationship. Self-centeredness may drive objectification in teen dating relationships or alternatively may be associated with other risk factors including substance use, exposure to violence or lack of opportunity, which increase TDV. Self-centeredness was associated with all types of TDV except abuse that was judged as less harmful. Perhaps there are multiple avenues to TDV perpetration, one motivated out of self-centeredness which yields a lack of empathy, and another motivated out of self-control relative to frustration and impulsivity. This dissertation offers a unique lens to look at the role of self-centeredness in TDV. While self-

centeredness has been investigated with adult male perpetrators of IPV (White et al., 2008) relative to type of abuse, applying adult models to adolescents is problematic. Future studies are warranted to determine whether TDV mirrors adult models of dating abuse.

This study also found evidence that personal and environmental factors combine to influence individual perceptions of TDV, consistent with expectations of the socio-ecological model (Bronfenbrenner, 1977). Adolescents who report perceived parental attention also report fewer self-control problems and endorse less tolerance of TDV behavior. In the same vein, perceived parental attention has a positive influence on self-control and is indirectly protective of TDV attitudes. Additionally, the amount of crime in a community was associated with indirect increases in tolerance for dating abuse. Consequently, effective TDV interventions might consider bolstering neighborhood cohesion and parental supervision as a way of fostering adolescents' respect for others, themselves and their community.

Finally, this dissertation investigates TDV attitudes of adolescents at one point in time in a single academic year. However, the larger SHARE study is longitudinal, following middle and high school cohorts, currently in the four years. Consequently, further analysis of TDV attitudes over time is possible and warranted, potentially identifying developmental trajectories and sensitive periods related to self-control (self-centeredness and low frustration tolerance), parental involvement (attention), neighborhood disorganization, and TDV attitudes. Furthermore, a number of moderators should be analyzed to identify youth that may be particularly at risk for TDV. For instance, middle schoolers may show more self-centeredness than high schoolers and consequently may be more at risk to perpetrate TDV. Other potential moderators worthy of investigation include gender and concentrated disadvantage to determine the role of gender and context on TDV

behavior. Finally, given the strong indirect influence of neighborhood disorganization identified by our study, it is important to understand community differences in TDV attitudes.

APPENDIX A

ATTITUDES ABOUT AGGRESSION IN DATING SITUATIONS SCALE

Smith Slep, A.M., Cascardi, M., Avery-Leaf, S., & O'Leary, K. D. (2001). Two New Measures of Attitudes About the Acceptability of Teen Dating Aggression. *Psychological Assessment, 13*(3), 306.

35. Below is a list of situations. How much do you agree or disagree that the **underlined/bolded** behavior is acceptable in that situation?

		Strongly Disagree	Disagree	Agree	Strongly Agree
a.	Mark calls Tina a slut in front of their friends. **Tina slaps him.**	O	O	O	O
b.	Lisa won't stop making fun of Charlie in front of their friends. Charlie loses his temper and **pushes her.**	O	O	O	O
c.	When with his friends, **Jenson will not hug or kiss his girlfriend Tanisha**.	O	O	O	O
d.	Jared and Vanessa have been dating for a couple months. They do everything together, but when Vanessa tries to go out with her girlfriends, **Jared gets very upset** so she doesn't go.	O	O	O	O
e.	Wendy sent her boyfriend Paul naked pictures of herself. **Paul posted one of these pictures on Facebook after they got into a fight.**	O	O	O	O
f.	Jenny and Dan are arguing because Jenny wants to see other guys. She gets really mad and starts to hit Dan. **Dan grabs Jenny and pushes her away.**	O	O	O	O
g.	Willis forgot to buy his girlfriend, Carmen, an anniversary present. **Carmen slashes his tires.**	O	O	O	O
h.	Jimmy and Sarah are going to see a movie. When they get to the counter to pay for their tickets, **Jimmy takes out his wallet and says, "I will pay, because we both know you can't afford it; just like last weekend."**	O	O	O	O
i.	**Francis frequently posts on her boyfriend Vinny's Facebook page that he should see a doctor about his bad acne**.	O	O	O	O
j.	Keisha sees Rick flirting with Angie. Keisha gets mad and **hits Angie** and tells her to keep her hands off Rick.	O	O	O	O
k.	David is following Maria and won't leave her alone. **Maria pushes him out of her way.**	O	O	O	O

35. Below is a list of situations. How much do you agree or disagree that the **underlined/bolded** behavior is acceptable in that situation?

		Strongly Disagree	Disagree	Agree	Strongly Agree
l.	Rebecca and Steven are hanging out with a group of friends. **Rebecca asks Steven, "Why don't you work out? You look so weak!"**	O	O	O	O
m.	**Danny yells at his girlfriend Brittany constantly because he says she dresses too hot or sexy.**	O	O	O	O
n.	Tony is harassing Gina about her new haircut, saying that she looks like a poodle. Gina gets really angry at Tony and **pushes him.**	O	O	O	O
o.	Brianna just graduated from high school. She had a graduation party, but her boyfriend, Caleb, **did not show up to her party.**	O	O	O	O
p.	Emily is on a date with her boyfriend, Zach. Zach dropped his fork on the floor and **Emily called him stupid.**	O	O	O	O
q.	Tom and Yolanda are having an argument. Tom starts pushing and shoving Yolanda. When he won't stop, **Yolanda slaps him**.	O	O	O	O
r.	Annamarie has her boyfriend, Vince's, password to his twitter account. She checks Vince's twitter account and **she confronts him whenever another girl tweets him.**	O	O	O	O
s.	Joshua asked his girlfriend, Penny, for her Facebook password because he thinks she's talking to other guys. Penny says "no" so **he finds where she wrote down her password and steals it.**	O	O	O	O
t.	Michelle gets really angry at Carlos for ignoring her, so **she hits him** to get his attention.	O	O	O	O
u.	Jeff finds out that Debbie has been seeing someone else behind his back. He gets really mad and **he slaps her.**	O	O	O	O
v.	Kenzie and Dean have been dating for 3 months. If Kenzie shows up even 1 minute late to hang out with Dean, **Dean yells at her and uses profanity (cuss words) towards her.**	O	O	O	O
w.	**Randy is pressuring his girlfriend, Patty, to send him naked pictures of her**. Patty is nervous because she heard how sometimes these types of pictures can be spread around.	O	O	O	O
x.	**Hannah texts Justin constantly to see where he is and what he is doing.**	O	O	O	O
y.	Karen is teasing Frank at a party about being too stupid to pass English. When she won't stop. Frank just loses it and **hits Karen.**	O	O	O	O

35. Below is a list of situations. How much do you agree or disagree that the **underlined/bolded** behavior is acceptable in that situation?

		Strongly Disagree	Disagree	Agree	Strongly Agree
z.	Sandra posts a status on her Facebook page about how she is so stressed out with school and has no time for anything. **Her boyfriend comments on her page saying, "If you can't make time for me, we're breaking up!"**	O	O	O	O
aa.	Henry and Holly are in a relationship. **Holly asked Henry for his passwords for his Facebook page so she can check up on him.**	O	O	O	O
ab.	John catches Janet flirting with Tyrone. John gets really mad and **hits Tyrone** for flirting with Janet.	O	O	O	O
ac.	Lucy's boyfriend, Patrick, looks at Lucy's Facebook page every day. **He makes fun of her by saying that she's trying to look sexy in her pictures.**	O	O	O	O
ad.	Tina and Jacob are dating. **Jacob constantly tells Tina that he wishes she was skinnier.**	O	O	O	O
ae.	**Peter slaps Patti when she threatens to break up with him.**	O	O	O	O
af.	Richard gives June a lot of attention and tells her how much he loves her. **If they do not have sex, Richard ignores June.**	O	O	O	O
ag.	Kristin has the gold necklace she got from her grandmother when she passed away that she wears every day. When Kristin and her boyfriend, Derek have a fight, **Derek rips the necklace off of her neck.**	O	O	O	O

Items on original AADS Scale (Slep et al., 2001): a, b, f, j, k, n, o, q, t, u, y, ab, ae.

APPENDIX B

NEIGHBORHOOD DISORGANIZATION - ROCHESTER YOUTH DEVELOPMENT STUDY

Thornberry, T.P., Krohn, M.D., Lizotte, A.J., Smith, C.A., & Tobin, K. (2003). *Gangs and delinquency in developmental perspective*. New York: Cambridge University Press.

26. Thinking of your neighborhood, how much of a problem is…

		Not a problem	Sort of a problem	A big problem
a.	High unemployment?	O	O	O
b.	Different racial or cultural groups who do not get along with each other?	O	O	O
c.	Vandalism, buildings and personal belongings broken and torn up?	O	O	O
d.	Little respect for rules, laws and authority?	O	O	O
e.	Drunks and junkies?	O	O	O
f.	Prostitution?	O	O	O
g.	Abandoned houses or buildings?	O	O	O
h.	Sexual assaults or rapes?	O	O	O
i.	Burglaries and thefts?	O	O	O
j.	Gambling?	O	O	O
k.	Run down and poorly kept buildings and yards?	O	O	O
l.	Syndicate, mafia or organized crime?	O	O	O
m.	Assaults and muggings?	O	O	O
n.	Street gangs or delinquent gangs?	O	O	O
o.	Homeless street people?	O	O	O
p.	Drug use or drug dealing in the open?	O	O	O
q.	Buying or selling stolen goods?	O	O	O

APPENDIX C

PARENTAL SUPERVISION

Arthur, M.W., Hawkins, J.D., Pollard, J.A., Catalano, R.F., & Baglioni, A.J. (2002). Measuring risk and protective factors for substance use, delinquency, and other adolescent problem behaviors: The Communities That Care Youth Survey. *Evaluation Review, 26*(6), 575-601.

The next sets of questions ask about your relationship with your family and how much they know about what you are doing. When we refer to your parents, we mean any adult that lives with you, including step-parents, guardians, grandparents etc.

17. Do your parents do the following?

		NO!	no	yes	YES!
a.	My parents ask if I've gotten my homework done.	O	O	O	O
b.	Would your parents know if you did not come home on time?	O	O	O	O
c.	When I am not at home, one of my parents knows where I am and who I am with.	O	O	O	O
f.	If you drank some beer or wine or liquor (for example, vodka, whiskey, or gin) without your parents' permission, would you be caught by your parents?	O	O	O	O
g.	If you skipped school would you be caught by your parents?	O	O	O	O
h.	If you carried a weapon without your parents' permission, would you be caught by your parents?	O	O	O	O

APPENDIX D

7. Please answer yes or no for each activity you do that is school related or that you are involved in outside of school.

		School related		Outside of school	
		Yes	**No**	**Yes**	**No**
a.	Sports	O	O	O	O
b.	After school clubs, such as boy scouts or honor society	O	O	O	O
c.	Extra-curricular lessons such as piano or foreign language	O	O	O	O
d.	Paid work/employment	O	O	O	O
e.	Community service or volunteer work	O	O	O	O

COMMUNITY INVOLVEMENT- CHICAGO YOUTH DEVELOPMENT PROJECT

Tolan, P.H., Gorman-Smith, D., & Henry, D.B. (2001). *Chicago Youth Development Study Community and Neighborhood Measure: construction and reliability technical report*. Families and Communities Research Group, Department of Psychiatry. University of Illinois at Chicago.

Now we are interested in the people that you know in your neighborhood and problems that you may have in your neighborhood.

25. How much do you agree or disagree with the following statements or how true are the following statements?

		True	**False**
d.	I have done volunteer work in the last year to benefit my neighborhood.	O	O

APPENDIX E

LOW SELF-CONTROL SCALE

Grasmick, H.G., Tittle, C.R., Bursik Jr., R.J., & Arneklev, B.J. (1993). Testing the core empirical implications of Gottfredson and Hirschi's general theory of crime. *Journal of Research in Crime and Delinquency, 30*, 5-29.

How much do you agree or disagree with each of the following statements?

		Strongly Disagree	Disagree	Agree	Strongly Agree
a.	I often act on the spur of the moment without stopping to think.	O	O	O	O
b.	I don't devote much thought and effort to preparing for the future.	O	O	O	O
c.	I often do whatever brings me pleasure now even at the cost of some distant goal.	O	O	O	O
d.	I'm more concerned with what happens to me in the short run than in the long run.	O	O	O	O
e.	I frequently try to avoid projects that I know will be difficult.	O	O	O	O
f.	When things get complicated, I tend to quit or withdraw.	O	O	O	O
g.	The things in life that are the easiest to do bring me the most pleasure.	O	O	O	O
h.	I dislike really hard tasks that stretch my abilities to the limit.	O	O	O	O
i.	I like to test myself every now and then by doing something a little risky.	O	O	O	O
j.	Sometimes I will take a risk just for the fun of it.	O	O	O	O
k.	I sometimes find it exciting to do things for which I might get in trouble.	O	O	O	O
l.	Excitement and adventure are more important to me than security.	O	O	O	O
m.	I would almost always rather do something physical than something mental.	O	O	O	O
n.	I usually feel better when I'm on the move than when I'm sitting and thinking.	O	O	O	O

o.	I like to get out and do things more than I like to read or think about ideas.	O	O	O	O
p.	I seem to have more energy and need for activity than most other people my age.	O	O	O	O
q.	I try to look out for myself first even if it makes things hard for other people.	O	O	O	O
r.	If things I do upset people, it is their problem, not mine.	O	O	O	O
s.	I'm not very sympathetic to other people when they are having problems.	O	O	O	O
t.	I'll try to get things I want even when I know it causes problems for other people.	O	O	O	O
u.	I lose my temper pretty easily.	O	O	O	O

		Strongly Disagree	**Disagree**	**Agree**	**Strongly Agree**
v.	Often, when I am angry at people, I feel more like hurting them than talking to them about why I am angry.	O	O	O	O
w.	When I am really angry, other people better stay away from me.	O	O	O	O
x.	When I have a serious disagreement with someone, it is usually hard for me to talk calmly about it without getting upset.	O	O	O	O

Figure 1. Simple SEM Model (Model A)

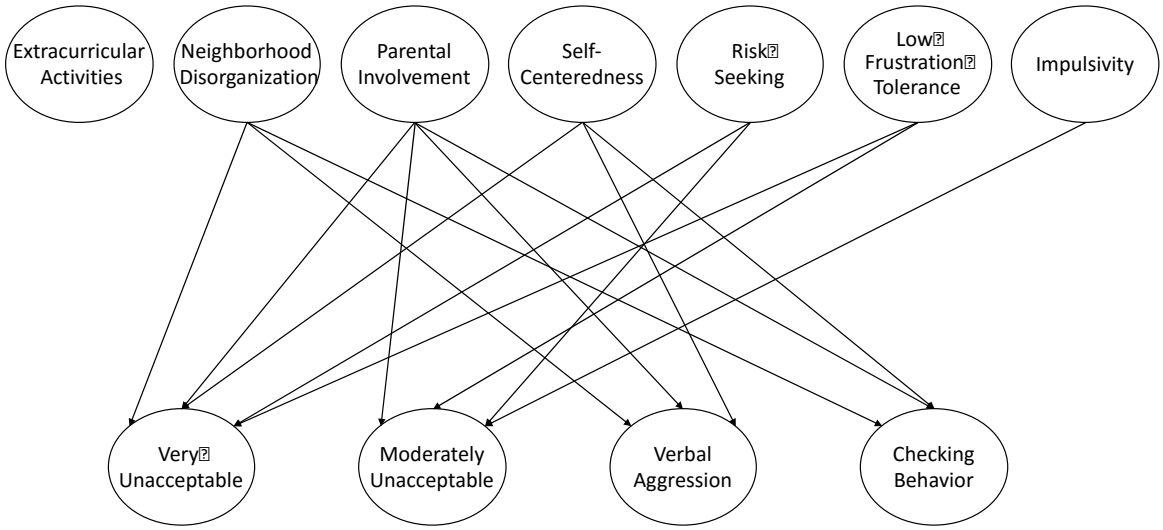

Figure 2: Mediation SEM Model (Model B)

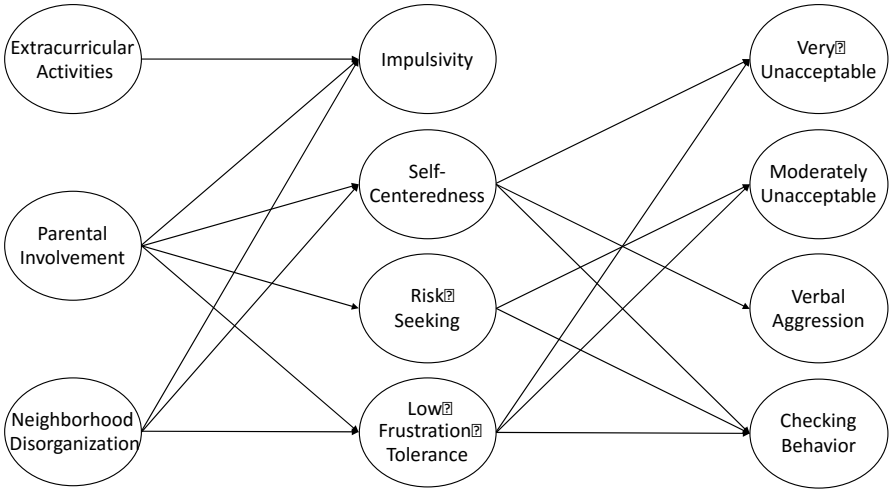

Figure 3: Adjusted Mediation SEM Model (Model C)

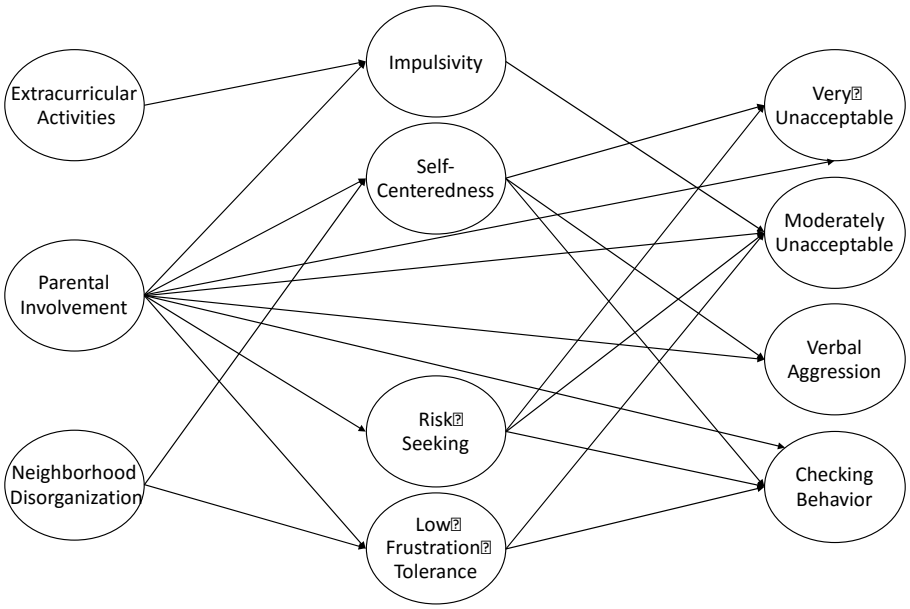

Table 1
Sample Descriptive Statistics

Name	Percentage
N (overall)	1236
Gender	
Male	52%
Female	48%
Missing	0.1%
Ethnicity	
White	67%
Non-white minority	33%
Missing	0.2%
Grade	
6th	48%
9th	52%
Risk Level	
Low	32%
Medium	29%
High	34%

Table 2
Percentage of respondents missing more than 20% of items

Scale	Percentage of missing	N missing
MAADS[a]	3.7%	46
Neighborhood Disorganization	2.1%	27
Parental Supervision	1.1%	13
Low Self-Control	2.8%	35
Extracurricular Involvement[b]	1.1- 5.7%	13-70

[a] Modified Attitudes about Aggression in Dating Situations Scale. [b] Extracurricular Involvement is composed of three scales.

Table 3

Skew and Kurtosis for Scale Means

Scale	Skew	Skew SD	Skew / SD	Kurtosis	Kurtosis SD	Kurtosis / SD
MAADS[a]	0.81	0.07	11.39	2.29	0.14	16.11
Neighborhood Disorganization	1.87	0.07	26.64	2.87	0.14	20.46
Parental Supervision	-0.76	0.07	-10.81	0.23	0.14	1.63
Self-Control (overall)	-0.14	0.07	-1.93	0.54	0.14	3.79
Impulsivity	0.05	0.07	0.70	0.20	0.14	1.44
Risk Seeking	-0.04	0.07	-0.57	-0.32	0.14	-2.25
Self-Centeredness	0.28	0.07	4.00	-0.05	0.14	-0.35
Low Frustration Tolerance	0.17	0.07	2.49	-0.49	0.14	-3.45

[a] Modified Attitudes about Aggression in Dating Situations Scale.

Table 4

Alpha Reliabilities, Means and Standard Deviations for Composite Variables

Construct	Composite Alpha	Mean	SD
MAADS Factor 1[a]	0.91	1.43	0.47
MAADS Factor 2[b]	0.81	2.06	0.64
MAADS Factor 3[c]	0.76	1.61	0.46
MAADS Factor 4[d]	0.76	1.76	0.57
Neighborhood Disorganization	0.95	1.34	0.46
Parental Supervision	0.74	3.32	0.54
Impulsivity	0.63	2.24	0.59
Low Frustration Tolerance	0.78	2.36	0.76
Risk Seeking	0.78	2.40	0.70
Self-Centeredness	0.63	2.02	0.59

[a] Very Unacceptable. [b] Moderately Unacceptable. [c] Verbal Aggression. [d] Checking Behavior.

Table 5

Items and loadings from MAADS Factor Analysis

	Factor Loadings			
Factor 1 Items: *Very Unacceptable Dating Behavior*	1	2	3	4
Peter slaps Patti when she threatens to break up with him.	0.80			
Kristin has the gold necklace she got from her grandmother when she passed away that she wears every day. When Kristin and her boyfriend, Derek have a fight, Derek rips the necklace off of her neck.	0.76			
Tina and Jacob are dating. Jacob constantly tells Tina that he wishes she was skinnier.	0.76			
Richard gives June a lot of attention and tells her how much he loves her. If they do not have sex, Richard ignores June.	0.75			
Kenzie and Dean have been dating for 3 months. If Kenzie shows up even 1 minute late to hang out with Dean, Dean yells at her and uses profanity (cuss words) towards her.	0.67			
Karen is teasing Frank at a party about being too stupid to pass English. When she won't stop. Frank just loses it and hits Karen.	0.65			
Jeff finds out that Debbie has been seeing someone else behind his back. He gets really mad and he slaps her.	0.60			
Randy is pressuring his girlfriend, Patty, to send him naked pictures of her. Patty is nervous because she heard how sometimes this type of pictures can be spread around.	0.53			
Lucy's boyfriend, Patrick, looks at Lucy's Facebook page every day. He makes fun of her by saying that she's trying to look sexy in her pictures.	0.47			
Michelle gets really angry at Carlos for ignoring her, so she hits him to get his attention.	0.43			
Wendy sent her boyfriend Paul naked pictures of herself. Paul, posted one of these pictures on Facebook after they got into a fight.	0.38			
Sandra posts a status on her Facebook page about how she is so stressed out with school and has no time for anything. Her boyfriend comments on her page saying, "If you can't make time for me, we're breaking up!"	0.36			
Factor 2 Items: *Moderately Unacceptable Dating Behavior*	1	2	3	4
Tony is harassing Gina about her new haircut, saying that she looks like a poodle. Gina gets really angry at Tony and pushes him.		0.68		
Mark calls Tina a slut in front of their friends. Tina slaps him.		0.67		
David is following Maria and won't leave her alone. Maria pushes him out of her way.		0.65		
Tom and Yolanda are having an argument. Tom starts pushing and shoving Yolanda. When he won't stop, Yolanda slaps him.		0.55		-0.31

Lisa won't stop making fun of Charlie in front of their friends. Charlie loses his temper and pushes her.	0.31	0.48		
Jenny and Dan are arguing because Jenny wants to see other guys. She gets really mad and starts to hit Dan. Dan grabs Jenny and pushes her away.		0.45		
Keisha sees Rick flirting with Angie. Keisha gets mad and hits Angie and tells her to keep her hands off Rick.		0.37		
Factor 3 Items: *Verbal Aggression*				
Rebecca and Steven are hanging out with a group of friends. Rebecca asks Steven, "Why don't you work out? You look so weak!"			0.60	
Emily is on a date with her boyfriend, Zach. Zach dropped his fork on the floor and Emily called him stupid.			0.54	
Brianna just graduated from high school. She had a graduation party, but her boyfriend, Caleb, did not show up to her party.			0.48	
Jimmy and Sarah are going to see a movie. When they get to the counter to pay for their tickets, Jimmy takes out his wallet and says, "I will pay, because we both know you can't afford it; just like last weekend."			0.48	
Jared and Vanessa have been dating for a couple months. They do everything together, but when Vanessa tries to go out with her girlfriends, Jared gets very upset so she doesn't go.			0.45	
Danny yells at his girlfriend Brittany constantly because he says she dresses too hot or sexy.			0.42	
Francis frequently posts on her boyfriend Vinny's Facebook page that he should see a doctor about his bad acne.			0.36	
Factor 4 Items: *Checking Behavior*				
Henry and Holly are in a relationship. Holly asked Henry for his passwords for his Facebook page so she can check up on him.				-0.66
Annamarie has her boyfriend, Vince's, password to his twitter account. She checks Vince's twitter account and she confronts him whenever another girl tweets him.				-0.52
Hannah texts Justin constantly to see where he is and what he is doing.				-0.51
Joshua asked his girlfriend, Penny, for her Facebook password because he thinks she's talking to other guys. Penny says "no" so he finds where she wrote down her password and steals it.				-0.39
John catches Janet flirting with Tyrone. John gets really mad and hits Tyrone for flirting with Janet.				-0.37

Note. Extraction Method: Principal Axis Factoring. Rotation Method: Oblimin with Kaiser Normalization; rotation converged in 6 iterations.

Table 6

Simple SEM Direct Pathways from Predictors to Dating Aggression Factors

Dating Aggression Factor	Predictor	Estimate	SE	Est./SE	P-value
Very Unacceptable from					
	Impulsivity	0.00	0.06	0.00	1.00
	Risk Seeking	-0.14	0.06	-2.38	0.02
	Self-Centeredness	0.22	0.05	4.47	0.00
	Low Frustration Tolerance	0.05	0.05	1.03	0.30
	Parental Supervision	-0.26	0.04	-6.64	0.00
	Neighborhood Disorganization	0.13	0.03	4.23	0.00
	Extracurricular Involvement	0.00	0.04	0.09	0.93
Moderately Acceptable from					
	Impulsivity	-0.16	0.06	-2.47	0.01
	Risk Seeking	0.19	0.06	3.16	0.00
	Self-Centeredness	0.05	0.05	0.91	0.37
	Low Frustration Tolerance	0.22	0.05	4.80	0.00
	Parental Supervision	-0.15	0.04	-3.59	0.00
	Neighborhood Disorganization	-0.07	0.03	-2.12	0.03
	Extracurricular Involvement	-0.03	0.04	-0.71	0.48
Verbal Aggression from					
	Impulsivity	-0.01	0.07	-0.12	0.90
	Risk Seeking	-0.08	0.07	-1.25	0.21
	Self-Centeredness	0.25	0.06	4.39	0.00
	Low Frustration Tolerance	-0.01	0.05	-0.29	0.77
	Parental Supervision	-0.23	0.04	-5.15	0.00
	Neighborhood Disorganization	0.07	0.04	2.09	0.04
	Extracurricular Involvement	0.01	0.04	0.12	0.91
Checking Behavior from					
	Impulsivity	-0.10	0.07	-1.46	0.14
	Risk Seeking	0.08	0.06	1.19	0.23
	Self-Centeredness	0.17	0.06	2.98	0.00
	Low Frustration Tolerance	0.13	0.05	2.65	0.01
	Parental Supervision	-0.18	0.04	-4.10	0.00

Neighborhood Disorganization	0.08	0.03	2.22	0.03
Extracurricular Involvement	-0.05	0.04	-1.17	0.24

Table 7
Simple SEM Latent Factor Correlations Between Predictors

		Estimate	S.E.	Est./S.E.	P-Value
Extracurricular with					
	Impulsivity	-0.14	0.05	-2.90	0.00
	Risk Seeking	0.05	0.04	1.18	0.24
	Self-Centeredness	-0.02	0.05	-0.50	0.62
	Low Frustration Tolerance	-0.06	0.04	-1.55	0.12
	Parental Supervision	0.04	0.04	1.04	0.30
	Neighborhood Disorganization	0.03	0.04	0.82	0.41
Neighborhood Disorganization with					
	Impulsivity	0.13	0.04	3.45	0.00
	Risk Seeking	0.07	0.03	2.14	0.03
	Self-Centeredness	0.16	0.04	4.66	0.00
	Low Frustration Tolerance	0.23	0.03	7.16	0.00
	Parental Supervision	-0.15	0.03	-4.41	0.00
Parental Supervision with					
	Impulsivity	-0.30	0.04	-7.66	0.00
	Risk Seeking	-0.47	0.03	-14.82	0.00
	Self-Centeredness	-0.30	0.04	-7.94	0.00
	Low Frustration Tolerance	-0.30	0.04	-8.68	0.00
Low Frustration Tolerance with					
	Impulsivity	0.47	0.04	13.25	0.00
	Risk Seeking	0.49	0.03	16.51	0.00
	Self-Centeredness	0.51	0.03	15.54	0.00
Self-Centeredness with					
	Impulsivity	0.52	0.04	13.70	0.00
	Risk Seeking	0.52	0.03	15.90	0.00
Risk Seeking with					
	Impulsivity	0.62	0.03	19.30	0.00

Table 8

Simple SEM Latent Factor Correlations Among Dating Aggression Factors

	Estimate	S.E.	Est./S.E.	P-Value
Checking Behavior with				
Very Unacceptable	0.77	0.02	38.16	0.00
Moderately Unacceptable	0.67	0.03	25.27	0.00
Verbal Aggression	0.65	0.03	22.66	0.00
Verbal Aggression with				
Very Unacceptable	0.73	0.02	34.69	0.00
Moderately Unacceptable	0.52	0.03	16.57	0.00
Moderately Unacceptable with				
Very Unacceptable	0.47	0.03	15.96	0.00

Table 9

Model B SEM Total Indirect Effects

	Estimate	S.E.	Est./S.E.	P-Value
to Very Unacceptable				
Parental Supervision	-0.19	0.03	-7.53	0.00
via Self-Centeredness	-0.13	0.03	-5.07	0.00
via Low Frustration Tolerance	-0.05	0.02	-2.65	0.01
Neighborhood Disorganization	0.05	0.01	4.10	0.00
via Self-Centeredness	0.03	0.01	2.72	0.01
via Low Frustration Tolerance	0.02	0.01	2.37	0.02
Extracurricular Involvement	-0.03	0.02	-1.51	0.13
to Moderately Unacceptable				
Parental Supervision	-0.23	0.03	-8.94	0.00
via Risk Seeking	-0.15	0.03	-4.93	0.00
via Low Frustration Tolerance	-0.10	0.02	-4.74	0.00
Neighborhood Disorganization	0.03	0.01	2.02	0.04
via Low Frustration Tolerance	0.03	0.01	3.68	0.00
Extracurricular Involvement	0.00	0.02	-0.07	0.95
to Verbal Aggression				
Parental Supervision	-0.18	0.03	-6.69	0.00
via Self-Centeredness	-0.13	0.03	-4.81	0.00
Neighborhood Disorganization	0.04	0.01	3.03	0.00
via Self-Centeredness	0.03	0.01	2.71	0.01
Extracurricular Involvement	-0.02	0.02	-1.10	0.27
to Checking Behavior				
Parental Supervision	-0.24	0.03	-9.01	0.00
via Self-Centeredness	-0.10	0.03	-3.80	0.00
via Low Frustration Tolerance	-0.08	0.02	-3.78	0.00
via Risk Seeking	-0.07	0.03	-2.40	0.02

Neighborhood Disorganization	0.05	0.01	3.35	0.00
via Low Frustration Tolerance	0.03	0.01	3.11	0.00
via Self-Centeredness	0.02	0.01	2.46	0.01
Extracurricular Involvement	-0.02	0.02	-0.77	0.44

Table 10

Model C Structural Equation Model Total Indirect Effects

	Estimate	S.E.	Est./S.E.	P-Value
to Very Unacceptable				
Parental Supervision	0.01	0.05	0.29	0.77
via Self-Centeredness	-0.09	0.02	-3.95	0.00
via Low Frustration Tolerance	-0.03	0.02	-1.42	0.16
Neighborhood Disorganization	0.04	0.01	3.05	0.00
via Self-Centeredness	0.02	0.01	2.14	0.03
via Low Frustration Tolerance	0.01	0.01	1.31	0.19
Extracurricular Involvement	-0.02	0.01	-1.27	0.20
to Moderately Unacceptable				
Parental Supervision	-0.12	0.04	-2.84	0.00
via Impulsivity	0.07	0.03	2.53	0.01
via Risk Seeking	-0.09	0.03	-2.87	0.00
via Low Frustration Tolerance	-0.08	0.02	-4.17	0.00
Neighborhood Disorganization	0.01	0.01	1.19	0.24
via Low Frustration Tolerance	0.03	0.01	3.19	0.00
Extracurricular Involvement	0.01	0.02	0.41	0.68
to Verbal Aggression				
Parental Supervision	-0.01	0.05	-0.16	0.88
via Self-Centeredness	-0.09	0.02	-3.84	0.00
Neighborhood Disorganization	0.02	0.01	1.94	0.05
via Self-Centeredness	0.02	0.01	2.18	0.03
Extracurricular Involvement	-0.01	0.01	-0.67	0.50
to Checking Behavior				
Parental Supervision	-0.10	0.05	-2.27	0.02
via Self-Centeredness	-0.07	0.02	-2.82	0.01

via Low Frustration Tolerance	-0.06	0.02	-2.95	0.00
via Risk Seeking	-0.01	0.04	-0.36	0.72
Neighborhood Disorganization	0.03	0.01	2.44	0.02
via Low Frustration Tolerance	0.02	0.01	2.45	0.01
via Self-Centeredness	0.01	0.01	1.91	0.06
Extracurricular Involvement	-0.01	0.02	-0.47	0.64

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ABSTRACT

TEEN DATING VIOLENCE: ATTITUDES AND THE MEDIATING ROLE OF SELF-CONTROL FROM A SOCIAL-ECOLOGICAL PERSPECTIVE

by

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The purpose of this study was to examine the relationship between Teen Dating Violence (TDV) attitudes and environmental and self-control constructs using structural equation models. First, adolescents (N=1236) attitudes about TDV were analyzed to determine if consistent distinct subtypes emerged. Distinct subtypes of TDV attitudes were identified: Very Unacceptable, Moderately Unacceptable, Verbal Aggression and Checking Behavior. Next the direct relationship between subtypes of TDV attitudes and self-control and environmental constructs, neighborhood disorganization, extracurricular activities and parental supervision, were investigated. TDV subtypes did indeed show unique relationships with environmental and self-control factors, further supporting the distinct types of teen dating violence (TDV). In particular, parental supervision associated with reduced tolerance for TDV, while self-centeredness, risk-seeking and low frustration tolerance self-control factors, as well as neighborhood disorganization were associated with greater tolerance for TDV. Finally, the potential mediation of the relationship between environmental constructs and TDV subtypes by self-control constructs was tested. Indirect effects of neighborhood disorganization on most subtypes of TDV were found to be mediated by self-centeredness. Parental supervision was directly associated with less tolerance for most types of

TDV, but also showed strong indirect effects via greater reported frustration tolerance and less risk seeking. Implications for research, prevention and interventions on TDV are discussed.

AUTOBIOGRAPHICAL STATEMENT

The author was born in Ann Arbor, Michigan. In 2006, he graduated with his Bachelor of Science in Brain, Behavior, and Cognition from the University of Michigan, Ann Arbor. He received his Master of Arts in Clinical Psychology from Wayne State University, Detroit, Michigan, in August 2012. He will graduate with his Doctorate of Philosophy in Clinical Psychology from Wayne State University, Detroit, Michigan, in December 2017 with minors in development and quantitative methods.